



**SPMUD BOARD OF DIRECTORS
REGULAR MEETING: 4:30 PM
February 6, 2020
SPMUD Board Room
5807 Springview Drive, Rocklin, CA 95677**

The District's regular Board meeting is held on the first Thursday of every month. This notice and agenda are posted on the District's web site (www.spmud.ca.gov) and posted in the District's outdoor bulletin board at the SPMUD Headquarters at the above address. Meeting facilities are accessible to persons with disabilities. Requests for other considerations should be made through the District Headquarters at (916)786-8555.

AGENDA

I. CALL MEETING TO ORDER

II. ROLL CALL OF DIRECTORS

Director Gerald Mitchell,	Ward 1
Vice President William Dickinson,	Ward 2
President John Murdock,	Ward 3
Director Victor Markey,	Ward 4
Director James Williams,	Ward 5

III. PLEDGE OF ALLEGIANCE

IV. CONSENT ITEMS

[pg 4 to 17]

Consent items should be considered together as one motion. Any item(s) requested to be removed will be considered after the motion to approve the Consent Items.

ACTION: (Roll Call Vote)

Motion to approve the consent items for the February 6, 2020 meeting

1. MINUTES from the January 9, 2020 Special Meeting [pg 4 to 8]
2. ACCOUNTS PAYABLE in the amount of \$655,794.57 through January 29, 2020. [pg 9 to 13]
3. QUARTERLY INVESTMENT REPORT in the total amount of \$62,220,466 through December 31, 2019. [pg 14 to 16]
4. RESOLUTION 20-05 DISPOSAL OF SURPLUS DISTRICT ITEMS, Resolution declaring certain office equipment surplus and ready for auction. [pg 16 to 17]

V. PUBLIC COMMENTS

Items not on the Agenda may be presented to the Board at this time; however, the Board can take no action.

VI. BOARD BUSINESS

Board action may occur on any identified agenda item. Any member of the public may directly address the Board on any identified agenda item of interest, either before or during the Board's consideration of that item.

1. RESOLUTION 20-06 ACCEPTING THE SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN (SECAP) [pg 18 to 44]

Staff will go over the results of the System Evaluation and Capacity Assurance Plan (SECAP) required pursuant to California State Water Resources Control Board Order No. 2006-0003-DWQ, Statewide General Waste Discharge Requirements. The District SECAP meets these requirements and will serve as a planning document for the District over the next five years until the SECAP will be updated and brought to the Board for recertification.

Action Requested: Roll Call Vote

Staff recommends that the Board of Directors adopt Resolution 20-06, accepting the System Evaluation and Capacity Assurance Plan (SECAP)

2. RESOLUTION 20-07 ACCEPTING THE NEXUS STUDY FOR THE SEWER PARTICIPATION CHARGE [pg 45 to 64]

Staff has evaluated the hydraulic capacity of the collection system under various scenarios to assure capacity for existing customers, and to obtain information in preparation for future development. The District has prepared a nexus study to justify fees in accordance with the Mitigation Fee Act, GC §66000.

Action Requested: Roll Call Vote

Staff recommends that the Board of Directors adopt Resolution 20-07, accepting the Nexus Study justifying the Sewer Participation Charge.

3. SOUTH PLACER WASTEWATER AUTHORITY (SPWA) BOARD MEETING REPORT – DIRECTOR JERRY MITCHELL [pg 65 to 70]

Director Mitchell, the District representative to the SPWA Board, will provide a brief update on the recent actions and activities of the SPWA Board.

No Action Requested: Informational Item

VII. REPORTS

[pg 71 to 81]

The purpose of these reports is to provide information on projects, programs, staff actions and committee meetings that are of general interest to the Board and public. No decisions are to be made on these issues.

1. Legal Counsel (A. Brown)
2. General Manager (H. Niederberger)
 - 1) ASD, FSD & TSD Reports
 - 2) Informational items
3. Director's Comments: Directors may make brief announcements or brief reports on their own activities. They may ask questions for clarification, make a referral to staff or take action to have staff place a matter of business on a future agenda.

VIII. ADJOURNMENT

If there is no other Board business the President will adjourn the meeting to its next regular meeting on **March 5, 2020 at 4:30 p.m.**

**SPECIAL BOARD MINUTES
SOUTH PLACER MUNICIPAL UTILITY DISTRICT**

Meeting	Location	Date	Time
Special	District Office	January 9, 2020	4:30 p.m.

I. CALL MEETING TO ORDER: A Special Meeting of the South Placer Municipal Utility District Board of Directors was called to order with President Williams presiding at 4:30 p.m.

II. ROLL CALL OF DIRECTORS:

Present: John Murdock, Jim Williams, Vic Markey, Will Dickinson, Jerry Mitchell

Absent: None

Vacant: None

Staff: Adam Brown, Legal Counsel
Herb Niederberger, General Manager
Carie Huff, District Engineer
Eric Nielsen, Assistant Superintendent
Sam Rose, District Superintendent
Emilie Costan, Administrative Services Manager

III. PLEDGE OF ALLEGIANCE: President Williams led the Pledge of Allegiance.

IV. CONSENT ITEMS:

1. MINUTES from December 5, 2019 Regular Meeting.
2. ACCOUNTS PAYABLE in the amount of \$1,012,504.00 through December 30, 2019.
3. BILL OF SALE FOR SEWER IMPROVEMENTS WHITNEY RANCH PHASE II F UNITS 59 & 61C – at an estimated value of \$1,345,212.

Director Dickinson made a motion to approve the consent items; a second was made by Director Markey; a voice vote was taken, and the motion carried 5-0.

V. PUBLIC COMMENTS:

President Williams opened the meeting for public comments. Hearing no comments, the public comments session was closed.

VI. BOARD BUSINESS

1. SELECTION OF OFFICERS AND APPOINTMENTS TO THE TEMPORARY ADVISORY COMMITTEES AND SPWA BOARD

President Williams dissolved the existing advisory committees.

President Williams nominated the current Vice President John Murdock to succeed as the new President for 2020.

Director Markey made a motion to nominate Director Dickinson to serve as Vice-President, a second was made by Director Williams, the motion carried 5-0.

President Murdock created temporary advisory committees and appointed Directors to serve as follows:

Fee & Finance Committee: Vice President Dickinson & Director Williams

Policy & Ordinance Committee: Director Markey & Director Mitchell

Loomis 2 x 2 Committee: Director Markey & Director Williams

Personnel Advisory Committee: Vice President Dickinson & President Murdock

Architectural Committee: Vice President Dickinson & Director Williams

President Murdock appointed Director Mitchell as District representative to the South Placer Wastewater Authority Board of Directors.

2. **RESOLUTION 20-01 AMENDING RESOLUTIONS 19-15, AND APPROVAL OF MID-YEAR ADJUSTMENTS TO THE FISCAL YEAR 19/20 BUDGET**

GM Niederberger provided the Board with a revised Board Report and Resolution. He gave a presentation on the mid-year budget adjustments which include increases in salary and benefits for additional positions and leave balance payouts, an increase in operations and maintenance due to unexpected pump failures, and increases for computers and office equipment, the Foothill Trunk Construction Project, the Corporation Yard Fence Replacement, and the Laserfiche implementation. GM Niederberger explained that staff originally proposed a mid-year adjustment to increase the budget for computers and office equipment by \$2000. This was revised to increase the amount an additional \$10,000 for a total proposed increase of \$12,000. This increase is proposed for the purchase of computer equipment and office furniture for new staff positions. The mid-year adjustments also include decreases due to delays in construction of the Corporation Yard Master Plan and Office Upgrades and the Newcastle Master Plan.

Director Dickinson asked for clarification on whether the operations maintenance increase was for lift stations or pump replacements. GM Niederberger clarified that the increase was for pump replacements.

President Murdock asked about the need for an increase for computers and office equipment. GM Niederberger responded that the additional funds were needed to purchase office furniture and computers for the new staff hired by the District. Director Markey made a motion to adopt Resolution 20-01; a second was made by Director Williams; a roll call vote was taken, and the motion carried 5-0.

3. **RESOLUTION 20-02 AWARD OF CONTRACT FOR THE FOOTHILL TRUNK CONSTRUCTION TO GARNEY PACIFIC, INC**

Assistant Superintendent Nielsen gave a presentation on the advertisement, bidding and selection of Garney Pacific for the Foothill Trunk Construction Project. Seven bids were received with an average bid amount of \$3.4 million. The lowest bid was Garney Pacific at \$2.7 million. AS Nielsen shared that the lowest bid was 9% higher than the amount budgeted. He also explained

that staff is seeking approval to execute change orders under \$50,000 but not to exceed an accumulated amount in excess of 10% of the total contract amount to allow staff to promptly respond to minor changes throughout the project.

Director Williams asked about the scope of the project. AS Nielsen gave an overview of the project plan. Director Williams also asked about rock issues similar to those experienced during the Loomis Diversion project. Assistant Superintendent Nielsen responded that information on the rock was provided to the contractors during the bidding process so it could be incorporated into their design and bid proposals.

Director Mitchell asked if approvals and permits have all been received. AS Nielsen responded that all permits are in hand and that construction is anticipated to start in late April or early May.

Vice President Dickinson asked about neighborhood impacts. AS Nielsen shared that the majority of the project is off the road but there is a section of Aguilar Road that will be impacted. The contractor will be responsible for a traffic control plan and mitigation. Staff has notified residents and will continue to provide updates to the neighbors throughout the project. Vice President Dickinson also asked whether there was one specific area in the bid that came in higher than the engineers original estimate. AS Nielsen shared that generally the pipe and manhole costs were higher than anticipated.

Director Markey made a motion to adopt Resolution 20-02; a second was made by Director Mitchell; a roll call vote was taken, and the motion carried 5-0.

4. **RESOLUTION 20-03 ADDENDUM #4 WITH WATER WORKS ENGINEERS FOR FOOTHILL TRUNK CONSTRUCTION PHASE SERVICES**

AS Nielsen gave a briefing on the Addendum with Water Works Engineers. The scope of work has been expanded to include having the design engineer available to respond to requests for information during construction, coordinate the construction meetings, review submittals, and perform environmental work during construction.

Director Mitchell asked about the reference to Stantec in the Addendum. AS Nielsen explained that Stantec is a subcontractor of Water Works that has been involved throughout the project.

Vice President Dickinson asked if all the work in the Addendum is new. Assistant Superintendent Nielsen stated that it is all new work; however, a portion of the bidding and initial work have been completed. Director Williams made a motion to adopt Resolution 20-03; a second was made by Vice President Dickinson; a roll call vote was taken, and the motion carried 5-0.

5. **RESOLUTION 20-04 AMENDING RESOLUTION 19-11 EXPANDING SCOPE – LOBBY SECURITY, LOCKER ROOM EXPANSION AND BREAK ROOM PROJECT**

Superintendent Rose gave a presentation on the proposed revisions to the Corporation Yard Expansion Project. The existing project included expansion of the lobby for increased security and expansion of the locker rooms. The revision is for a three-phase project. Phase 1 is for construction of a new combined breakroom that joins the two main buildings. Phase 2 is for expansion and reconfiguration of the existing lobby, and phase 3 is for a locker room expansion,

reconfiguration of the existing stairway to meet accessibility requirements, and adding offices in the space currently used as the FSD breakroom. The phased approach allows the District to move staff into the new breakroom space as their existing workspace is impacted by construction.

President Murdock asked for clarification on whether the breakroom would be finished out when staff temporarily move into the space. Superintendent Rose shared that discussion on how much of the interior would be finished before staff moved into the space has not occurred yet.

Director Mitchell asked for the project timeline. Regina Soucek from Williams and Paddon shared that entitlements will be required as the buildings are part of a Planned Unit Development. The entitlement process is anticipated to take 3 to 4 months. Plan review of the construction drawings is anticipated to take an additional 2 to 3 months. Early estimates for construction anticipate that it will take 5 months for phase 1, 1 month for phase 2, and a few months for phase 3 with the project completion in early Fall. Regina stated that she believes the breakroom could be finished out before staff are temporarily moved into the space.

Director Mitchell asked for clarification on the location of the breakroom and the use of the existing FSD breakroom. Regina provided the clarification. GM Niederberger discussed funding for the 2.3-million-dollar project. He shared that the Fee and Finance Committee is considering a proposal to revise Policy 3130, the District's Reserve Policy. Funding for the project will come to the Board for approval next fiscal year.

Vice President Dickinson made a motion to adopt Resolution 20-04; a second was made by Director Markey; a roll call vote was taken, Director William abstained, and the motion carried 4-0.

6. GENERAL MANAGER GOALS FOR 2020

GM Niederberger shared that he has five goals for 2020 and reviewed the programmed items for the year. He asked for any additional goals that the Board may have. Vice President Dickinson asked that 6) analysis and potential funding of an account with the California Employee Prefunded Pension Trust (CEPPT) and 7) an improved investment report, be added as 2020 goals. The remainder of the Board found these additions acceptable and they have been added to the list of GM goals for 2020.

VII. REPORTS

1. **District General Counsel (A. Brown):** General Counsel Brown had no additional report for this meeting.
2. **General Manager (H. Niederberger):** There were no additions to the General Managers report.
 - A. **ASD, FSD & TSD Reports:**

Vice President Dickinson asked if District Engineer Huff would be leading the Standard Specifications update. DE Huff responded that AS Nielsen would be completing the update. Vice President Dickinson asked if the update would address grease interceptors. AS Nielsen responded that this section is a major component of the updates. Vice President Dickinson also asked about FOG compliance numbers. AS Nielsen responded that the decrease was anticipated as all customers were brought into compliance and now are

having to maintain the compliance. Staff is continuing to educate customers about the maintenance requirements.

B. Information Items: No additional items.

3. Director's Comments:

President Murdock reminded the Board of the required Ethics and Harassment Training.

Director Mitchell asked why there were two SPWA meetings, one in January and one in February. GM Niederberger responded that it was due to staff availability. SPWA has a meeting in January to set a meeting in February.

Director Williams thanked the Board for their hard work during his time as President.

VIII. CLOSED SESSION

**Public Employment - GENERAL MANAGER PERFORMANCE EVALUATION
(Per Subdivision (a) of Government Code Section 54957)**

The Board adjourned into closed session at 5:30 p.m.

President Murdock re-opened the Board meeting at 5:35 pm. The Board of Directors met in closed session to discuss the General Manager's evaluation.

Action Taken: The Board awarded the General Manager 4.5% of his annual salary to the General Manager's 401a) Supplemental Retirement account.

IX. ADJOURNMENT

The President adjourned the meeting at 5:36 p.m. to the next regular meeting to be held on February 6, 2020 at 4:30 p.m.



Emilie Costan, Board Secretary



South Placer Municipal Utility District, CA

Check Report

By Check Number

Date Range: 12/31/2019 - 01/29/2020

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Bank Code: AP Bank-AP Bank						
1240	Placer County Personnel	01/02/2020	Regular	0.00	3,111.84	11843
1652	Cintas Corporation	01/02/2020	Regular	0.00	871.51	11844
1087	Dawson Oil Co.	01/02/2020	Regular	0.00	2,698.97	11845
1666	Great America Financial Services	01/02/2020	Regular	0.00	452.99	11846
1134	Harris Industrial Gases	01/02/2020	Regular	0.00	121.13	11847
1218	PCWA	01/02/2020	Regular	0.00	84.80	11848
1221	PG&E (Current Accounts)	01/02/2020	Regular	0.00	831.00	11849
1253	Recology Auburn Placer	01/02/2020	Regular	0.00	307.28	11850
1265	Rocklin Area Chamber of Commerce	01/02/2020	Regular	0.00	175.00	11851
1518	Sonitrol of Sacramento	01/02/2020	Regular	0.00	82.17	11852
1325	Tyler Technologies, Inc.	01/02/2020	Regular	0.00	400.00	11853
1327	US Bank Corporate Payment	01/07/2020	Regular	0.00	13,090.09	11856
	Void	01/07/2020	Regular	0.00	0.00	11857
	Void	01/07/2020	Regular	0.00	0.00	11858
	Void	01/07/2020	Regular	0.00	0.00	11859
	Void	01/07/2020	Regular	0.00	0.00	11860
	Void	01/07/2020	Regular	0.00	0.00	11861
	Void	01/07/2020	Regular	0.00	0.00	11862
1007	Advanced Integrated Pest	01/09/2020	Regular	0.00	106.00	11863
1020	Aqua Sierra Controls, Inc.	01/09/2020	Regular	0.00	272.00	11864
1021	ARC	01/09/2020	Regular	0.00	96.53	11865
248	AT&T (916.663.1652) & (248.134.5438.608.80)	01/09/2020	Regular	0.00	251.06	11866
1022	AT&T (9391035571) & (9391053973)	01/09/2020	Regular	0.00	314.51	11867
1652	Cintas Corporation	01/09/2020	Regular	0.00	485.66	11868
1068	City of Roseville	01/09/2020	Regular	0.00	334,982.16	11869
1086	Dataprose	01/09/2020	Regular	0.00	1,705.65	11870
1113	Ferguson Enterprises, Inc. 1423 (Main)	01/09/2020	Regular	0.00	98.67	11871
1124	Gold Country Media Publications	01/09/2020	Regular	0.00	416.83	11872
1686	Jan Pro	01/09/2020	Regular	0.00	829.00	11873
1564	Jensen Landscape Services, LLC	01/09/2020	Regular	0.00	861.00	11874
1640	Joshua Pirhofer	01/09/2020	Regular	0.00	407.80	11875
1218	PCWA	01/09/2020	Regular	0.00	660.80	11876
1221	PG&E (Current Accounts)	01/09/2020	Regular	0.00	4,185.37	11877
1291	Special District Risk Management Authority (SDRM)	01/09/2020	Regular	0.00	7,538.92	11878
1306	Superior Equipment Repair	01/09/2020	Regular	0.00	818.82	11879
1307	Sutter Medical Foundation-Corporate	01/09/2020	Regular	0.00	358.00	11880
1499	TechRoe.com LLC	01/09/2020	Regular	0.00	800.00	11881
1325	Tyler Technologies, Inc.	01/09/2020	Regular	0.00	4,192.50	11882
1718	U-Rock Utility Equipment Inc	01/09/2020	Regular	0.00	650.00	11883
1346	WEF Membership (Water Environment Federation)	01/09/2020	Regular	0.00	263.00	11884
1019	Aqua Engineering Co., Inc.	01/16/2020	Regular	0.00	4,422.47	11895
1020	Aqua Sierra Controls, Inc.	01/16/2020	Regular	0.00	424.50	11896
248	AT&T (916.663.1652) & (248.134.5438.608.80)	01/16/2020	Regular	0.00	9.28	11897
1663	Buckmaster Office Solutions	01/16/2020	Regular	0.00	125.01	11898
1652	Cintas Corporation	01/16/2020	Regular	0.00	448.51	11899
1509	Crystal Communications	01/16/2020	Regular	0.00	311.64	11900
1139	Hill Rivkins Brown & Associates	01/16/2020	Regular	0.00	3,060.00	11901
1631	Instrument Technology Corporation	01/16/2020	Regular	0.00	402.25	11902
1726	Josh Leiko	01/16/2020	Regular	0.00	20.00	11903
1646	National Benefit Services (NBS)	01/16/2020	Regular	0.00	644.00	11904
1218	PCWA	01/16/2020	Regular	0.00	1,457.73	11905
1475	Petersen & Mapes, LLP	01/16/2020	Regular	0.00	880.00	11906
1473	Pitney Bowes Purchase Power	01/16/2020	Regular	0.00	208.99	11907
1244	Preferred Alliance Inc	01/16/2020	Regular	0.00	202.72	11908

Check Report

Date Range: 12/31/2019 - 01/29/2020

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
1518	Sonitrol of Sacramento	01/16/2020	Regular	0.00	945.13	11909
1333	SPOK, Inc.	01/16/2020	Regular	0.00	26.31	11910
1306	Superior Equipment Repair	01/16/2020	Regular	0.00	500.38	11911
1338	Verizon Wireless	01/16/2020	Regular	0.00	1,091.15	11912
1699	ECS Imaging Inc.	01/23/2020	Regular	0.00	3,600.00	11913
1652	Cintas Corporation	01/23/2020	Regular	0.00	667.99	11914
1073	Consolidated Communications	01/23/2020	Regular	0.00	1,909.07	11915
1723	CWEA TCP	01/23/2020	Regular	0.00	94.00	11916
1131	Granite Business Printing	01/23/2020	Regular	0.00	190.77	11917
1666	Great America Financial Services	01/23/2020	Regular	0.00	501.58	11918
1599	MUN CPA's	01/23/2020	Regular	0.00	1,000.00	11919
1224	Paramount Awards	01/23/2020	Regular	0.00	36.47	11920
1507	Silke Communications	01/23/2020	Regular	0.00	941.31	11921
1499	TechRoe.com LLC	01/23/2020	Regular	0.00	900.00	11922
1240	Placer County Personnel	01/27/2020	Regular	0.00	3,263.12	11924
1327	US Bank Corporate Payment	01/28/2020	Regular	0.00	15,336.26	11925
	Void	01/28/2020	Regular	0.00	0.00	11926
	Void	01/28/2020	Regular	0.00	0.00	11927
	Void	01/28/2020	Regular	0.00	0.00	11928
	Void	01/28/2020	Regular	0.00	0.00	11929
1015	American Fidelity Assurance	12/31/2019	Bank Draft	0.00	1,119.80	DFT0005067
1230	Pers (EFT)	12/31/2019	Bank Draft	0.00	6,288.80	DFT0005068
1230	Pers (EFT)	12/31/2019	Bank Draft	0.00	26,469.86	DFT0005069
1230	Pers (EFT)	12/31/2019	Bank Draft	0.00	10,146.01	DFT0005070
1230	Pers (EFT)	12/31/2019	Bank Draft	0.00	115.84	DFT0005071
1230	Pers (EFT)	12/31/2019	Bank Draft	0.00	53.02	DFT0005072
1230	Pers (EFT)	12/31/2019	Bank Draft	0.00	2,502.00	DFT0005073
1586	Principal Life Insurance Company	12/31/2019	Bank Draft	0.00	356.80	DFT0005074
1045	Cal Pers 457 Plan (EFT)	01/10/2020	Bank Draft	0.00	375.00	DFT0005086
1135	Mass Mutual (EFT)	01/10/2020	Bank Draft	0.00	7,490.52	DFT0005087
1135	Mass Mutual (EFT)	01/10/2020	Bank Draft	0.00	455.70	DFT0005088
1580	TASC	01/10/2020	Bank Draft	0.00	384.62	DFT0005089
1580	TASC	01/10/2020	Bank Draft	0.00	407.70	DFT0005090
1229	Pers (EFT)	01/10/2020	Bank Draft	0.00	146.93	DFT0005091
1229	Pers (EFT)	01/10/2020	Bank Draft	0.00	254.90	DFT0005092
1229	Pers (EFT)	01/10/2020	Bank Draft	0.00	419.97	DFT0005093
1229	Pers (EFT)	01/10/2020	Bank Draft	0.00	3,186.13	DFT0005094
1229	Pers (EFT)	01/10/2020	Bank Draft	0.00	5,249.94	DFT0005095
1229	Pers (EFT)	01/10/2020	Bank Draft	0.00	97.41	DFT0005096
1229	Pers (EFT)	01/10/2020	Bank Draft	0.00	134.70	DFT0005097
1229	Pers (EFT)	01/10/2020	Bank Draft	0.00	1,391.61	DFT0005098
1229	Pers (EFT)	01/10/2020	Bank Draft	0.00	1,924.39	DFT0005099
1229	Pers (EFT)	01/10/2020	Bank Draft	0.00	2,261.36	DFT0005100
1229	Pers (EFT)	01/10/2020	Bank Draft	0.00	2,340.11	DFT0005101
1149	Internal Revenue Service	01/10/2020	Bank Draft	0.00	12,102.34	DFT0005102
1098	EDD (EFT)	01/10/2020	Bank Draft	0.00	3,679.37	DFT0005103
1098	EDD (EFT)	01/10/2020	Bank Draft	0.00	975.98	DFT0005104
1149	Internal Revenue Service	01/10/2020	Bank Draft	0.00	2,830.42	DFT0005105
1149	Internal Revenue Service	01/10/2020	Bank Draft	0.00	8,971.38	DFT0005106
1045	Cal Pers 457 Plan (EFT)	01/24/2020	Bank Draft	0.00	375.00	DFT0005133
1135	Mass Mutual (EFT)	01/24/2020	Bank Draft	0.00	7,790.52	DFT0005134
1135	Mass Mutual (EFT)	01/24/2020	Bank Draft	0.00	455.70	DFT0005135
1580	TASC	01/24/2020	Bank Draft	0.00	384.62	DFT0005136
1580	TASC	01/24/2020	Bank Draft	0.00	407.70	DFT0005137
1229	Pers (EFT)	01/24/2020	Bank Draft	0.00	146.93	DFT0005138
1229	Pers (EFT)	01/24/2020	Bank Draft	0.00	254.90	DFT0005139
1229	Pers (EFT)	01/24/2020	Bank Draft	0.00	419.97	DFT0005140
1229	Pers (EFT)	01/24/2020	Bank Draft	0.00	3,186.12	DFT0005141
1229	Pers (EFT)	01/24/2020	Bank Draft	0.00	5,249.94	DFT0005142
1229	Pers (EFT)	01/24/2020	Bank Draft	0.00	104.79	DFT0005143
1229	Pers (EFT)	01/24/2020	Bank Draft	0.00	144.92	DFT0005144

Check Report

Date Range: 12/31/2019 - 01/29/2020

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
1229	Pers (EFT)	01/24/2020	Bank Draft	0.00	1,497.11	DFT0005145
1229	Pers (EFT)	01/24/2020	Bank Draft	0.00	2,070.29	DFT0005146
1229	Pers (EFT)	01/24/2020	Bank Draft	0.00	2,266.31	DFT0005147
1229	Pers (EFT)	01/24/2020	Bank Draft	0.00	2,345.24	DFT0005148
1149	Internal Revenue Service	01/24/2020	Bank Draft	0.00	12,995.32	DFT0005149
1098	EDD (EFT)	01/24/2020	Bank Draft	0.00	3,654.25	DFT0005150
1098	EDD (EFT)	01/24/2020	Bank Draft	0.00	1,016.99	DFT0005151
1149	Internal Revenue Service	01/24/2020	Bank Draft	0.00	3,039.22	DFT0005152
1149	Internal Revenue Service	01/24/2020	Bank Draft	0.00	9,047.44	DFT0005153
1098	EDD (EFT)	01/24/2020	Bank Draft	0.00	3,150.00	DFT0005154
1229	Pers (EFT)	01/24/2020	Bank Draft	0.00	-4.95	DFT0005157
1229	Pers (EFT)	01/24/2020	Bank Draft	0.00	-5.13	DFT0005158
1098	EDD (EFT)	01/24/2020	Bank Draft	0.00	0.51	DFT0005160
1149	Internal Revenue Service	01/24/2020	Bank Draft	0.00	0.60	DFT0005163
1015	American Fidelity Assurance	01/27/2020	Bank Draft	0.00	1,119.80	DFT0005164
1586	Principal Life Insurance Company	01/27/2020	Bank Draft	0.00	356.80	DFT0005165
1230	Pers (EFT)	01/27/2020	Bank Draft	0.00	6,288.80	DFT0005166
1230	Pers (EFT)	01/27/2020	Bank Draft	0.00	26,212.39	DFT0005167
1230	Pers (EFT)	01/27/2020	Bank Draft	0.00	8,147.94	DFT0005168
1230	Pers (EFT)	01/27/2020	Bank Draft	0.00	109.75	DFT0005169
1230	Pers (EFT)	01/27/2020	Bank Draft	0.00	2,641.00	DFT0005170
1230	Pers (EFT)	01/27/2020	Bank Draft	0.00	59.11	DFT0005171

Bank Code AP Bank Summary

Payment Type	Payable Count	Payment Count	Discount	Payment
Regular Checks	101	64	0.00	426,141.70
Manual Checks	0	0	0.00	0.00
Voided Checks	0	10	0.00	0.00
Bank Drafts	63	63	0.00	207,062.51
EFT's	0	0	0.00	0.00
	164	137	0.00	633,204.21

Check Report

Date Range: 12/31/2019 - 01/29/2020

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
1645	Aspire Retirement Solutions	01/22/2020	Bank Draft	0.00	22,590.36	DFT0005155

Bank Code PY Bank Summary

Payment Type	Payable Count	Payment Count	Discount	Payment
Regular Checks	0	0	0.00	0.00
Manual Checks	0	0	0.00	0.00
Voided Checks	0	0	0.00	0.00
Bank Drafts	1	1	0.00	22,590.36
EFT's	0	0	0.00	0.00
	1	1	0.00	22,590.36

All Bank Codes Check Summary

Payment Type	Payable Count	Payment Count	Discount	Payment
Regular Checks	101	64	0.00	426,141.70
Manual Checks	0	0	0.00	0.00
Voided Checks	0	10	0.00	0.00
Bank Drafts	64	64	0.00	229,652.87
EFT's	0	0	0.00	0.00
	165	138	0.00	655,794.57

Fund Summary

Fund	Name	Period	Amount
100	GENERAL FUND	12/2019	47,052.13
100	GENERAL FUND	1/2020	608,742.44
			655,794.57

**SOUTH PLACER MUNICIPAL UTILITY DISTRICT
STAFF REPORT**

To: Board of Directors

From: Herb Niederberger, General Manager

Cc: Emilie Costan, Administrative Services Manager

Subject: 4th Quarter Investment Report (October 1, 2019 thru December 31, 2019)

Board Date: February 6, 2020

Overview

In accordance with Section 53646 of the California Government Code, this report provides the Board with a quarterly investment report.

The investments held by the District on December 31, 2019 are shown in Attachment 1 and totaled \$62.2 million. The portfolio is in compliance with the Board's adopted policy regarding District investments and has the ability to meet the next six months of cash flow requirements. As of December 31, 2019m the District's investment portfolio had an average yield to maturity of 1.59 percent.

Recommendation

Staff recommends that the Board of Directors receive and file the 4th Quarter Investment Report.

Strategic Plan Goal

This action is consistent with SPMUD Strategic Plan Goals:

- Goal 1.3: Maintain Transparency with all District activities.
- Goal 4.1: Maintain Compliance with Pertinent Regulations
- Goal 5.2: Explore and evaluate investment and business practice alternatives.
- Goal 5.3: Maintain financial responsibility by ensuring allocated funding sources are adequate to meet expenses; and that available funds and resources are managed efficiently.
- Goal 5.6: Provide routine reports on Financial Stability.

Related District Ordinances and Policies

This action is in conjunction with the following District Policies:

- Policy 3120 – Investment of District Funds

Fiscal Impact

There is no direct fiscal impact associated with the preparation of this report.

Attachments:

1. 4th Quarter Investment Report
2. Allocation by Fund, Allocation by Investment Type, and Historical Performance

SPMUD BOARD INVESTMENT REPORT
INVESTMENT REPORTING PERIOD: October 1, 2019 - December 31,2019
MEETING DATE: February 6, 2019

Investment	Par Value	Market Value	Book Value	Yield to Maturity	% of Portfolio	Days to Final Maturity
CALTRUST - Short Term	\$ 4,262,792	\$ 4,262,792	\$ 4,262,792	1.87%	7%	1
CALTRUST - Medium Term	\$ 16,989,594	\$ 16,989,594	\$ 16,989,594	1.72%	27%	1
WELLS FARGO - Money Market	\$ 8,057,254	\$ 8,057,254	\$ 8,057,254	1.49%	13%	1
WELLS FARGO - Fixed Income Securities	\$ 15,000,000	\$ 14,990,434	\$ 15,015,746	1.59%	24%	638
PLACER COUNTY TREASURY	\$ 7,333,471	\$ 7,333,471	\$ 7,333,471	1.82%	12%	1
LAIF (Local Agency Investment Fund)	\$ 6,267,932	\$ 6,267,932	\$ 6,267,932	2.11%	10%	1
CASH	\$ 4,309,423	\$ 4,309,423	\$ 4,309,423	0.55%	7%	1
TOTAL/AVERAGE	62,220,466	62,210,900	62,236,212	1.59%	100%	92

*Please note information presented is current at print time, and may be delayed by approximately 30 days.

DEFINITIONS

Par Value is the principal amount of a security and the amount of principal that will be paid at maturity.

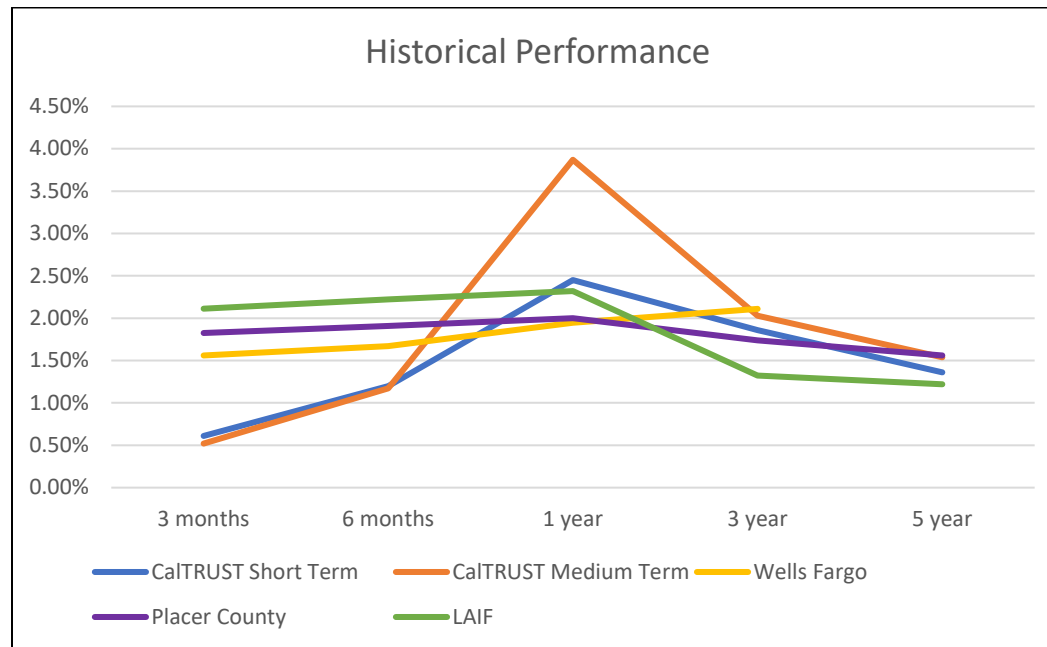
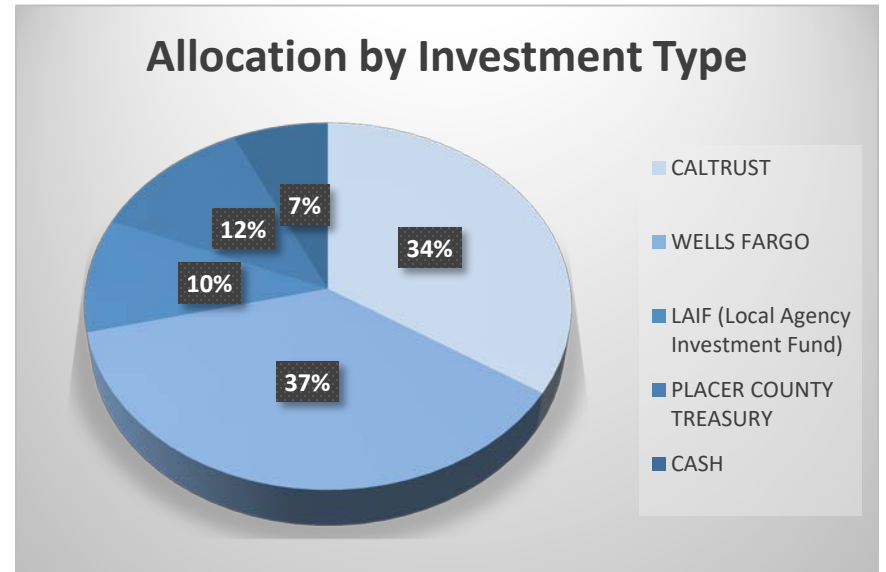
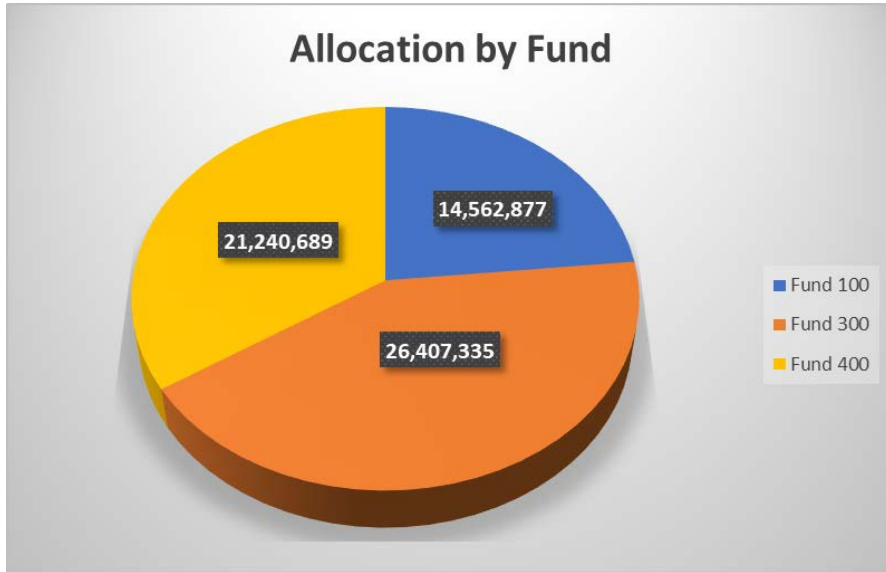
Market Value is the value at which a security can be sold at the time it is priced or the need to sell arises.

Market values are only relevant if the investment is sold prior to maturity. Profit or loss would be realized only if the specific investment were to be sold.

Book Value is the purchase price of a security plus amortization of any premium or discount. This may be more or less than face value, depending upon whether the security was purchased at a premium or at a discount.

Yield to Maturity is the estimated rate of return assuming the investment is held until maturity.

Attachment 2 – Allocation by Fund, Allocation by Investment Type, and Historical Performance



SOUTH PLACER MUNICIPAL UTILITY DISTRICT

STAFF REPORT

To: Board of Directors
From: Sam Rose, Superintendent
Cc: Herb Niederberger, General Manager
Subject: Resolution 20-05 – Disposal of District Surplus Items
Meeting Date: February 6, 2020

Overview

The office furniture in the Superintendent’s office was purchased in 2003 and is scheduled for replacement in the current fiscal year. In accordance with Policy No. 3300 – Disposal of Surplus Property, District property with a unit value greater than \$500 shall be declared surplus by the Board of Directors. Furniture items will be disposed of in accordance with policy.

Recommendation

Staff recommends that the Board of Directors adopt Resolution 20-05 to declare the items listed therein as surplus.

Strategic Plan Goals

This action is consistent with SPMUD Strategic Plan Goals:

Goal 1.3: Maintain Transparency with all District Activities

Related District Ordinances and Policies

This action complies with the following District Policy:

Policy No. 3300 – Disposal of Surplus Property or Equipment

Fiscal Impact

The items will be removed from the District’s Fixed Assets and whatever salvage value is realized will be deposited into Fund 400 – Capital Replacement and Rehabilitation.

**SOUTH PLACER MUNICIPAL UTILITY DISTRICT
STAFF REPORT**

To: Board of Directors

From: Eric Nielsen, Assistant Superintendent
Carie Huff, District Engineer

Cc: Herb Niederberger, General Manager

Subject: 2020 System Evaluation and Capacity Assurance Plan (SECAP)

Meeting Date: February 6, 2020

Overview

Provision D.13.viii of the State Water Resources Control Board (SWRCB) Order No. 2006-0003-DWQ, *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (SSS WDR)*, specifies that SPMUD shall have a System Evaluation and Capacity Assurance Plan (SECAP). The SECAP is required to evaluate hydraulic deficiencies, establish design criteria (e.g., the design storm), and produce short-term and long-term capital improvement projects to address deficiencies and plan for future growth. Information developed in the SECAP is used to establish the cost of participation fees through a nexus study as required in the Mitigation Fee Act.

The District's previous SECAP was completed in 2015. California Government Code requires that the SECAP and the associated sewer participation fee nexus study be updated every five years.

Recommendation

Staff recommends the Board of Directors adopt Resolution No. 20-06 accepting the System Evaluation and Capacity Assurance Plan dated January 2020.

Strategic Plan Goal

This action is consistent with SPMUD Strategic Plan Goals:

- Goal 3.3: Develop and implement a Tactical Asset Management Program.
- Goal 4.1: Maintain compliance with pertinent regulations.
- Goal 4.2: Prevent and mitigate Sanitary Sewer Overflows (SSOs) using the most efficient and effective maintenance and operational methods and procedures.
- Goal 5.1: Maintain wastewater rates sufficient to meet financial needs, operational demands, regulatory requirements and customer expectations.

Related District Ordinances and Policies

This action relates to the following SPMUD Ordinances and Policies:

- Policy 3370: Sewer System Management Plan (SSMP)

Fiscal Impact

The results of the SECAP are the basis for determining the cost of the participation fees that are required for each future connection or change in density. These fees are the source of revenue for Fund 300 and fund the projects identified in the SECAP.

Attachments:

- Resolution 20-06 – Adoption of the District System Evaluation and Capacity Assurance Plan
- South Placer Municipal Utility District 2020 System Evaluation and Capacity Assurance Plan

SOUTH PLACER MUNICIPAL UTILITY DISTRICT

RESOLUTION NO. 20-06

ACCEPTING THE DISTRICT SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

WHEREAS, California State Water Resources Control Board Order No. 2006-0003-DWQ, *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*, requires the South Placer Municipal Utility District (District) to evaluate hydraulic deficiencies, establish and implement design criteria, establish short-term and long-term capital improvement projects to address system deficiencies, and develop a schedule for the planned projects; and

WHEREAS, the District has evaluated the hydraulic capacity of the collection system under various scenarios to assure capacity for existing customers and to obtain information to prepare for future development; and

WHEREAS, the results of the System Evaluation and Capacity Assurance Plan are used to set the District's sewer participation fee and demonstrate a reasonable relationship between the sewer participation fee and the purpose for which it is charged.

NOW, THEREFORE BE IT RESOLVED by the Board of Directors of the South Placer Municipal Utility District hereby accepts the System Evaluation and Capacity Assurance Plan dated January 2020 as meeting the requirements of the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.

PASSED AND ADOPTED at a Regular Meeting of the South Placer Municipal Utility District Board of Directors at Rocklin, CA this 6th day of February 2020.

Signed: _____
John R. Murdock, President of the Board of Directors

Attest: _____
Emilie Costan, Board Secretary



SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

January 2020

South Placer Municipal Utility District

5807 Springview Drive
Rocklin, CA 95677





SOUTH PLACER MUNICIPAL UTILITY DISTRICT Wastewater Collection System System Evaluation and Capacity Assurance Plan

Date: January 2020

Prepared by: Eric Nielsen, P.E.
Carie Huff, P.E.
Curtis Little, GISP

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CHAPTER 1: Introduction

1.1 Purpose

The purpose of the South Placer Municipal Utility District (SPMUD or District) System Evaluation and Capacity Assurance Plan (SECAP) is to provide the District guidance in its efforts to assure capacity for existing customers, provide information on how to prepare for future development, and provide information on how to make the collection system resilient to the effects of weather conditions. This report serves as an update to the SECAP prepared for the District in 2015. The District implemented the recommendations of the 2015 SECAP to address the predicted deficiencies in capacity under the existing and near-term scenarios. This was accomplished by constructing the Loomis Diversion Line and preparing to replace the Foothill Trunk Sewer with a larger diameter pipeline. The purpose of this updated SECAP is to reassess the capacity of the District's sewer collection system after these improvements and after five years of changes in the use of the system.

The specific objectives of this System Evaluation and Capacity Assurance Plan include:

- Evaluate the capacity of the collection system under various scenarios (i.e., existing dry weather, existing wet weather, near-term wet weather, and long-term wet weather conditions) to identify potential capacity deficiencies and assign capital improvements projects to address any potential deficiencies for each scenario.
- Expand the scope of the SECAP to evaluate all collection system facilities six inches in diameter and larger.
- Estimate the costs of planned capital improvement projects that address capacity deficiencies. The estimated costs will be used in the District's Nexus Study to determine the participation fee for new connections to the sewer system.
- Comply with requirements of the California State Water Resources Control Board Order No. 2006-0003-DWQ, the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (SSS WDR) and the District's SSMP to evaluate hydraulic deficiencies, establish and implement design criteria (i.e., design storm), establish short-term and long-term capital improvement projects to address system deficiencies, and develop a schedule of completion dates for the planned capital improvements projects.

This SECAP provides the District with updated information on the existing and future hydraulic capacity of the collection system and serves as an update to the 2015 SECAP. The following chapters of this report describe the assumptions used, the process of model development, the model simulation results, and the resulting proposed capital improvement projects.



CHAPTER 2: Project Overview

2.1 Project Boundary

South Placer Municipal Utility District serves the communities of Rocklin, Loomis, Penryn, Newcastle, and portions of Granite Bay and unincorporated Placer County. The District owns, operates, and maintains a collection system, which consists of approximately 280 miles of mainline pipe (ranging from 4-inch to 54-inches in diameter), over 6000 manholes, thirteen lift stations, and ten permanent flow monitoring stations. Exhibit 1 in Appendix A shows a map of the District service area as well as the area evaluated with the hydraulic model as part of this study. This study area coincides with the study area identified in the 2015 SECAP and the District's urban growth area (UGA). The UGA is identified in the South Placer Wastewater Authority (SPWA) Wastewater Systems Evaluation Project, which evaluated the combined systems of the regional partners discharging to the two regional wastewater treatment plants.

Exhibit 1 also shows the areas that were not included in this study and thus were not evaluated with the hydraulic model. The Rodgersdale community was not included in the hydraulic model for the same reasons it was not evaluated in previous planning documents (i.e., the entire community is built out with no room for future development and according to District records, there are no existing capacity related issues). Additionally, the District's sphere of influence (SOI), which represents the full extent of the District's potential service range, was not included in the hydraulic model to remain consistent with previous hydraulic evaluations and South Placer Wastewater Authority system evaluations so that direct comparisons can be made and because the extension of the collection system into this area is very unlikely at this point, even under long-term scenarios.

2.2 Hydraulic Modeling Software

The capacity of the District wastewater collection system was analyzed using Innovyze's InfoSewer software program. InfoSewer is a powerful map-based computer program with comprehensive hydraulic computational capabilities. The District purchased the InfoSewer software and license so that future analyses could be conducted by District staff as additional data is collected and additional inquiries arise due to future development. The InfoSewer product provided extensive scenario management so that multiple scenarios (i.e., existing, near-term, long-term, dry weather, wet-weather, various improvements) can be tracked and compared, one against the other.

2.3 Flow Monitoring

The District has ten permanent flow monitors in the collection system that collect and store flow data in fifteen-minute intervals. Flow records from the years 2015 through 2018 were used in this study to evaluate changes in flow patterns and calibrate the volume of flow entering each basin within the system.

2.4 Design Storm

In addition to the permanent flow monitors described above, the District has installed and currently maintains rain gauges throughout the system. The rain gauges collect data regarding the amount of precipitation in fifteen-minute intervals on a continuous basis. Rainfall data from the entire year of 2018 was used in the study to define the rate of inflow and infiltration into the collection system from storm events.



The 10-year, 6-hour storm event was established as the design storm for the District during the development of the 2009 master plan. The same design storm was used in this study.

The design storm for the study’s model simulations was developed using the EPA’s Sanitary Sewer Overflow Analysis and Planning (SSOAP) Toolbox. The SSOAP Toolbox is a suite of computer software tools that allows one to utilize collected data for both sewer flows and rainfall to predict rainfall-dependent inflow and infiltration (RDI/I). RDI/I was defined by using the RTK method to generate synthetic unit hydrographs for each basin within the collection system. The unit hydrographs are used to develop the design storm hydrographs. The 10-yr, 6-hr storm event for the Rocklin area as defined by the National Oceanic and Atmospheric Administration (NOAA) Atlas 14, Volume 6, Version 2 data was applied to the synthetic unit hydrographs to produce the RDI/I hydrographs for each basin.

Observed storm events in 2017 provided anecdotal evidence of the benefit of using this design storm to analyze the capacity of collection system. District staff witnessed how large storm events stressed the capacity of the collections system in the portions of the system predicted by the model.

2.5 Scenario Development

One of the study’s objectives was to investigate the collection system’s capacity under varying conditions, and to propose potential improvements to address capacity-related deficiencies. To meet this objective, the study examined the hydraulic capacity of the system under existing conditions, after near-term development occurs, and under long-term development (ultimate build-out) conditions. The model also investigated the impact of rain events (i.e., RDI/I) by simulating each temporal variation in the model (i.e., existing, near-term, long-term) under dry weather conditions and during the design storm event described in section 2.4. Table 1 provides the naming convention of the various scenarios used in the model and a brief description of each scenario.

Table 1. Summary of Model Scenarios

Scenario	ADWF	PWWF	CIPs	Description
Existing (2020)	✓	✓	NA	Current collection system infrastructure. Current EDUs as defined in District records.
Near-Term (2025)	✓	✓	NA	Collection system after required improvements to existing system (i.e., Foothill Trunk). Addition of EDUs from near-term development as defined in city/town/community general plans.
Long-Term (2060)	✓	✓	✓	Future collection system. Addition of EDUs from long-term development as defined in city/town/community general plans for parcels within the UGA.

The existing scenario is an important first step in the capacity assessment. The amount of flow added to the model and the spatial distribution of that flow (i.e., defining how flow from all existing 23,000 connections enters the collection system) are verified and calibrated during this step. This increases the confidence in the simulated results.



The year 2025 was defined as the near-term scenario because this is the year when the District will reevaluate and update the SECAP the next time. This scenario examines the expected changes and the potential for needed improvements before the next time the system is evaluated.

The year 2060 was defined as the long-term scenario because this is consistent with previous planning documents and is a reasonable timeframe for buildout for the District. This timeframe also aligns with the assumptions and requirements of the SPWA Wastewater Systems Evaluation Project to investigate future development and buildout-sensitivity.

2.6 Capacity Analysis

For purposes of this study, capacity-deficient pipes are defined as those having less than three feet of freeboard (i.e., three feet from the hydraulic grade line to the rim elevation of the manhole). A freeboard of zero feet indicates that a discharge of sanitary sewer occurs. Once a pipe segment begins to surcharge, the addition of small amounts of flow can make dramatic changes to the level of surcharging in manholes. However, surcharging in manholes typically only occurs for short durations, during design storm events (i.e., 10-year, 6-hour rainfalls). This criterion is used so that small amounts of surcharging is allowable during the design storm scenario.

CHAPTER 3: Model Development

Model development is generally separated into two main phases. The first phase involves defining the physical attributes (i.e., pipe and manhole diameters, lengths, roughness coefficients, invert elevations, rim elevations) of the collection system. The second phase involves defining the amount and location of flows entering the system. This chapter describes the process employed to develop the model simulations used during the capacity assurance study.

Model results were obtained using extended period simulations over a three-day period. This method was selected so that the variation in flow and the impact on the system's capacity could be assessed during the design storm event and in the days that follow.

3.1 Physical Geometry

The hydraulic model represents the actual collection system with a combination of features which include pipe, manholes, wet wells, pumps, and force mains. The location and attribute information for these model features was supplied by the District's geographic information system (GIS). This information was used to create the modeled collection system to which flows would be applied to assess the system's capacity.

Previous planning efforts (i.e., the 2009 Master Plan and the 2015 SECAP) only modeled the District's trunk sewers (i.e., pipes 12 inches in diameter and larger). The District's efforts to improve its GIS system since the last SECAP allowed for this iteration of the SECAP to include all sewer mains within the system. The collection system model consists of approximately 280 miles of gravity sewer mains. All gravity sewer mains were modeled assuming a Manning's n value of 0.013.



Modeling all features within a sewer collection system requires significant amounts of data (e.g., pipe invert elevations, manhole rim elevations, pump settings). There are several immediate benefits of modeling all features within the collection system. This approach allows the District to assess every pipe within the system for information such as maximum capacity, minimum/maximum velocities, and depth to overflow. Not only does this approach provide the District additional functionality in assessing the current collection system, it also provides the District a tool to quickly and effectively assess the potential impact of future, proposed development.

Modeling the entire collection system required that a total of ten lift stations also be included in the model to appropriately characterize and convey system flows. Information about wet wells, pumps, set points, and force mains were collected from record drawings and incorporated into the model.

Proposed future pipe segments were added to the model under near-term and long-term scenarios to assess the capacity of those segments to serve future connections. Various elevation data sources were employed to investigate the topography in areas to determine if parcels could be served by the gravity pipelines added to the model. It should be noted that these assumptions were not based on survey-grade information and may require alterations during final design to account for more accurate information.

The physical geometry of the model was vetted through multiple checks. The modeling software provides tools to check the validity and integrity of the physical geometry of the modeled system. These checks were employed on the modeled system and include connectivity checks (e.g., orphan nodes, orphan links, link direction, loop finder) and network review/fix tools (e.g., trace tools, check for invalid crowns or invalid rim elevations). In addition to these tools, the modeled network was manually investigated for incorrect data using profile tools.

3.2 Hydraulic Loading

The flows modeled in this study were generated at the parcel-level and applied to the collection system. Flows were modeled in this way so that unit generation rates could be applied based on customer type, land use designations, and parcel size. This method was also selected because it provides a method for documenting assumed unit generation rates for future modeling efforts and back-checking of model simulation results. Data from various District systems of record were leveraged to accurately distribute the flow from its customers throughout the collection system. This section describes the methods used to assign flow volumes from individual units/parcels for the various scenarios.

3.2.1 Unit Flow Factors

The District applies a specific number of equivalent dwelling units (EDUs) to its customers as they connect to the collection system in accordance with the current District Sewer Code. An EDU is a unit of measure that standardizes all land use types and represents a unit of flow (gallons per day), at a certain wastewater strength, from a single-family residential unit. A business which discharges three times as much similarly characterized wastewater as an average single-detached dwelling would be assigned three EDUs. The number of EDUs for each customer was supplied by the District's customer account database (i.e., Tyler Incode) and used to calculate flows from each parcel into the collection system. To remain consistent with previous District planning efforts and the regional South Placer Wastewater Authority system evaluation efforts, 190 gpd/EDU was applied as the default unit flow factor throughout all model simulations.



Existing Development

The parcels connected to the existing collection system and the usage type of each parcel were identified using District customer account records. Three main categories for usage type were applied in the model (i.e., residential, commercial, and mixed use). Diurnal patterns were developed for each of the usage types and applied to the flows generated from each parcel.

Model results from the existing dry weather simulation were used to compare against the recorded flow monitoring data to calibrate the model. This is a crucial step to assure that the model results accurately reflect the amount of flow observed in the system. Model calibration for dry weather flows required adjustment of the unit flow factors from several sewer sheds in order to match modeled flows to the observed metered flows. The modified unit flow factors determined for this modeling effort closely matched the modified unit flow factors that were developed and used during the independent SPWA Systems Evaluation that was being conducted at the same time, which provides additional validity to the factors used. The results of the dry weather model calibration are shown in Exhibit 2. The dry weather diurnal curves for the years 2015-2018 are included where available to compare the change in flow from year to year. The influence of the various lift stations is evident in some basins by the peaks in modeled flow indicating pump cycles. The peaks of pump cycles are not seen in the diurnal curves because they are averaged out over the entire dry season. It should be noted that the Whitney Ranch area is the fastest growing area of the District. The modeled results of the Whitney Ranch basin exceed the diurnal curve flows due to this assumed growth.

Near-Term Development

Parcels that are anticipated to be developed in the near-term (i.e., by the year 2025) were identified and assigned EDUs based on information from District records about specific development projects in the entitlement process or from designated land uses. The following sources were used to determine future land uses for each parcel in the District.

- City of Rocklin Draft General Plan Update (Quad Knopf, Inc., October 2012)
- Town of Loomis General Plan (Crawford Multari & Clark Associates, July 2001)
- Placer County General Plan (Placer County, August 1994)
- Horseshoe Bar / Penryn Community Plan (August 1994)
- Granite Bay Community Plan (May 1989)

Long-Term Development

The long-term hydraulic loading of the model was completed by including all the developable parcels within the Urban Growth Area (UGA). This scenario models all parcels as contributing to the collection system and thus represents the ultimate build out of the UGA. The general plans referenced above, along with Placer County zoning information were used to determine the use and assumed hydraulic loading of long-term developments.

Many of the parcels designated as connecting to the collection system under the long-term scenario are in rural areas of the UGA. Many of the parcels currently contain residences that have individual septic systems and are located on large areas of land. Because of the lack of information about these parcels with respect to future development plans, it is difficult to definitively determine the eventual loading onto the system.



The modeled system assumed that parcels that currently contain residences or businesses will not develop (e.g., subdivide) in the future. Those residences/businesses will abandon their individual septic systems and connect to the District collection system when the District expands service into those areas. Currently vacant or undeveloped parcels were assumed to develop according to the Placer County zoning requirements regarding minimum parcel size to determine the future hydraulic loading.

The total EDUs for each scenario and its associated average dry weather flow are shown in Table 2.

Table 2. Summary of EDUs and Flows from Modeled Growth Scenarios

Scenario	Total EDUs	Additional EDUS from Previous Scenario	ADWF (mgd)	AWWF (mgd)
Existing (2020)	34,530	-	4.62	8.67
Near-Term (2025)	37,315	2,785	5.15	9.70
Long-Term (2060)	46,850	9,535	6.95	15.99

The City of Rocklin is quickly approaching buildout. Infill development will likely continue to occur, but much of the large properties within the City have been developed. Consequently, the rate of new connections to the sewer system is likely to slow as the District approaches the long-term scenario. Figure 1 shows the historic rate of growth of the District in the cumulative increase of EDUs over time. The figure also shows a projection of future EDUs based on the estimates provided in Table 2. The cumulative total of historic and estimated future EDUs shows a typical “s-curve” pattern. The rate of growth was relatively slow when the District was first established. During the 2000’s the rate of growth peaked. The rate of growth has slowed some since then and it is reasonable to expect that it will continue to slow as the amount of large developable land decreases.

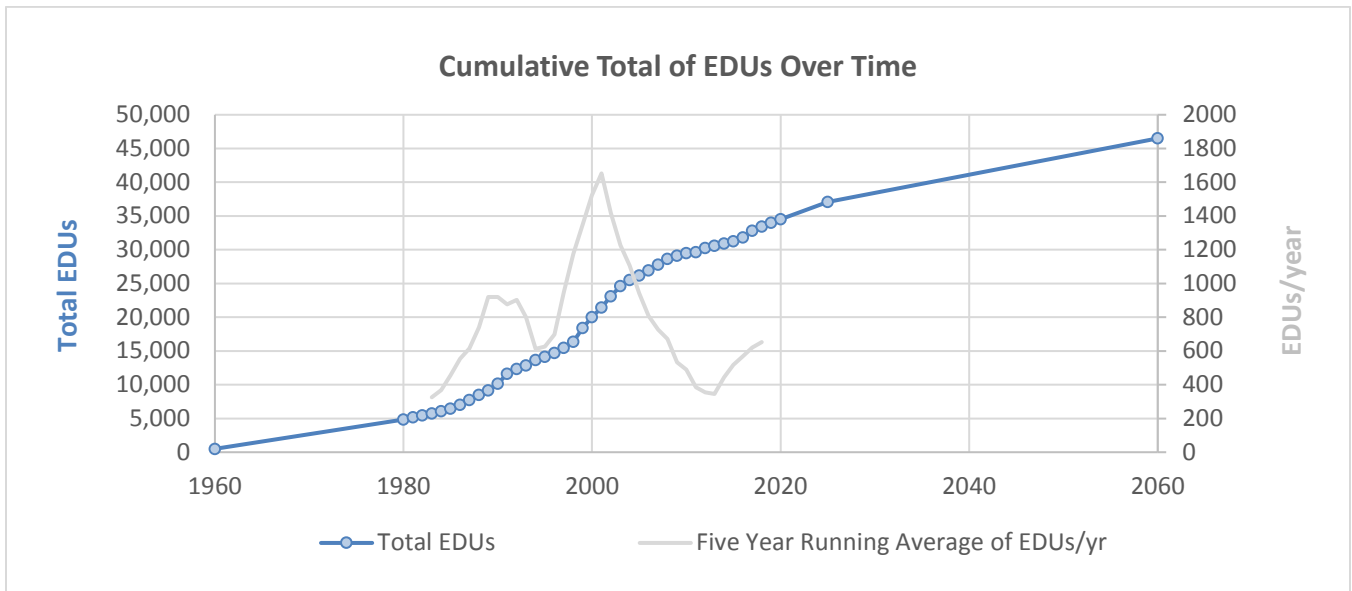
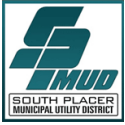


Figure 1. SPMUD Equivalent Dwelling Unit (EDU) History and Projections



3.2.2 Allocation of Generated Flows

The InfoSewer software applies loads (i.e., sewer flow) to the model using the manhole features. The hydraulic loads generated at each parcel, as described in section 3.2.1, were individually allocated to specific manholes within the system. This was accomplished by assigning a connecting manhole to each parcel within the limits of the UGA. The InfoSewer Load Allocator extension automates the process of summing the hydraulic loads from various parcels and assigning the loads to the designated manholes. Additionally, the Load Allocator extension sums each type of hydraulic load (e.g., residential, commercial) separately, so that the appropriate diurnal curve can be applied to the matching hydraulic load type.

Assigning hydraulic loads to each parcel and assigning each parcel to a manhole in the model of the system more closely represents reality with the model simulations and thus improves the reliability of the results. Additionally, this approach documents the process used to develop model simulations and allows for current and future users of the modeling software to more easily examine and retrace the assumptions made to produce the model results.

3.2.3 Rainfall Dependent Inflow/Infiltration

Rainfall dependent inflow and infiltration (RDI/I) is the increased portion of water flow in a sanitary sewer system that occurs during and after a rainfall event. RDI/I can represent a significant portion of the collection system's capacity to convey wastewater. This section describes the process used during this study to quantify the amount of RDI/I entering the District's collection system, and the method used to represent the level of RDI/I in the model simulations.

The data collected by the District's flow monitoring stations and rain gauge station were used to quantify the amount of RDI/I entering the system from each sewer basin. The quantity and timing of RDI/I entering the collection system in response to the design storm was developed using the EPA's Sanitary Sewer Overflow Analysis and Planning (SSOAP) Toolbox. Utilizing this method allowed the model to more accurately represent the response of each basin to the design storm based on observed data. The basin-specific RDI/I was spatially distributed to the modeled system using a gallon per linear foot approach.

Because historic flow monitoring data can do little to predict the response of future collection system components (e.g., pipes, manholes), a general RDI/I value was applied to future portions of the collection system modeled in the near-term and long-term scenarios. A value of 600 gpd/ac was applied to the hydraulic load from parcels connecting to the system under these future scenarios. This value is representative of the RDI/I values observed in the newer portions of the District's existing collection system after the SSOAP Toolbox analysis. Certain portions of the existing system exhibited lower values of RDI/I than 600 gpd/ac entering the system, but this number was selected as a conservative, yet realistic number to represent RDI/I entering the system from new development.



CHAPTER 4: Capacity Analysis Results

4.1 Existing Capacity

Under existing dry weather conditions, the model simulation showed that the pipes in the collection system, with a few exceptions, flow less than 50% full during the period of peak flow. Pipe segments along the Foothill Trunk exceed 50% full during peak flow. These pipes have limited hydraulic capacity due to the shallow pipe slopes along this trunk sewer. No sanitary sewer overflows occur under the existing dry weather scenario. Exhibit 3 in Appendix A shows the results of the capacity assurance analysis under existing dry weather conditions.

Under existing wet weather conditions, the model simulation showed no sanitary sewer overflows (SSOs). However, it also showed surcharging in the Foothill Trunk and in the Bankhead Trunk along Humphrey Road. The model simulation also showed brief surcharging in a couple of pipe segments of the Antelope Creek Trunk and other portions of the Bankhead Trunk. These are areas known to the District as potential capacity restrictions and are monitored with automated level sensors and portable flow recorders. The Foothill Trunk is currently under contract to be replaced with larger diameter pipes. The other trunk sewers mentioned above are scheduled to be replaced with larger diameter pipes in the long-term scenario. The schedule for replacement will be expedited if monitoring data indicates a trend toward a potential SSO.

Exhibit 4 in Appendix A shows the results of the capacity assurance analysis under existing wet weather conditions. The figure also shows the simulated peak flows through every pipe segment of the collection system.

4.2 Near-Term Capacity

Under near-term wet weather conditions, the model simulation showed no sanitary sewer overflows (SSOs). The modeled system assumes that the Foothill Trunk Sewer Replacement project is complete. The same trunk sewers that surcharge under existing wet weather conditions, surcharge under the near-term wet weather conditions. Because the surcharging is brief in nature and these trunk sewers are closely monitored, the schedule for constructing larger diameter replacement sewers is outside of the next five-year period. Should development occur differently than assumed for this analysis and generate additional sewer flow, these trunk sewers may require replacement sooner than anticipated.

Exhibit 5 in Appendix A shows the results of the capacity assurance analysis under near-term wet weather conditions and identifies the capacity deficiencies described above.

4.3 Long-Term Capacity

Under the long-term wet weather scenario, the model simulation showed the trunk sewers in the Antelope Creek and Secret Ravine basins are overwhelmed and multiple SSOs occurred in the model (see Exhibit 6 in Appendix A). These basins have a significant amount of additional area within the UGA that connects to the collection system under the long-term conditions. The trunk sewers in these basins are some of the oldest in the District and were not originally designed to convey ultimate build out flows. Conversely, the model simulation showed that the Pleasant Grove basin (i.e., west Rocklin) has no pipe segments with capacity deficiencies.



Exhibit 7 in Appendix A shows the results of the capacity assurance analysis under the long-term wet weather conditions and identifies the capacity deficiencies described above. The figure also shows the proposed alignments of future trunk lines needed to collect and convey ultimate build out flows. The numbers shown on the figure correspond with the ID identified for each proposed capital improvement project in the tables below.

CHAPTER 5: Capital Improvement Projects

5.1 Completed Projects

Several capital improvement projects identified in previous plans were completed and should be documented in this update of the SECAP.

The Upper Antelope Creek East trunk sewer in Swetzer Road was completed in 2013 and allowed for the abandonment of the Munoz Lift Station. The sewer flows from the western portion of Penryn now flow by gravity through the Bankhead Trunk.

The Lower Loomis Diversion projects (i.e., the 15-inch and 18-inch diameter trunk sewer) that connect the 10-inch trunk in Loomis on the northwest side of Interstate 80 with the Sierra College Lift Station were completed in January of 2019. This project provided the ability to divert flow from the 10-inch Lower Loomis Trunk, lessening the likelihood of an SSO from the 10-inch Lower Loomis Trunk during rain events.

The Foothill Trunk Sewer Replacement project was designed and permitted during the last five years. It is currently under contract to be constructed. Since the construction of that facility is not complete, it remains as a project within this SECAP.

5.2 Project Cost Assumptions

An important step of the SECAP process is to determine the cost of needed future improvements. District Resolution 18-22 established a schedule of values to be used for the valuation of sewer system assets. The schedule of values includes a baseline construction cost for open cut construction and options for trenchless construction methods. The schedule of values also includes additional costs for items such as extraordinary dewatering, hard rock conditions, productivity factors, and surface restoration. Project costs were developed for each proposed capital improvement project using this schedule of values.

Many of the capital improvement projects identified in the District's SECAPs assume the replacement of an existing facility to provide the needed additional capacity. The District manages different funds for different activities. One fund (i.e., Fund 300) is used for the extension or expansion of sewer facilities for new users. Another fund (i.e., Fund 400) is used to depreciate assets and pay for the eventual replacement and/or rehabilitation of assets when they reach the end of their useful service life. A new method for appropriately assigning the costs of SECAP projects was developed for this SECAP to align with the designated functions of these two funds.



When replacing an existing trunk sewer, a portion of the cost can reasonably be funded with depreciation that was collected for the purpose of replacing assets that no longer provide the expected level of service (e.g., age out). When replacing an existing trunk sewer with a larger diameter pipe, the cost for a portion of that project

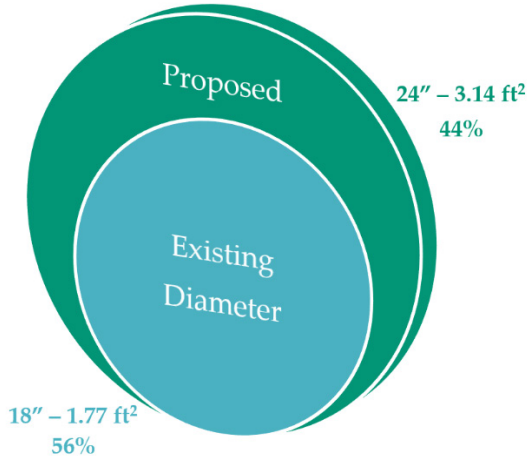


Figure 2. Ratio of Cross-Sectional Areas

can reasonably be funded with participation fees (e.g., connection fees) collected in response to the connection’s impact on available capacity. The District uses a method based on the ratio between the existing and the proposed cross-sectional areas of the trunk sewer to apportion the costs of the project. This method was selected because the cross-sectional area of a pipeline is related to the capacity of the pipeline to convey sewer.

For example, an 18-inch diameter pipeline has a cross-sectional area of 1.77 ft². If it were to be replaced with a 24-inch diameter pipeline (which has a cross-sectional area of 3.14 ft²), the existing cross-sectional area of the 18-inch pipe represents 56% of the proposed cross-sectional area of the 24-inch pipe. In this example, 56% of the project cost would be paid for “replacing” (i.e., Fund 400) the pipeline and 44% of the project cost would be paid for “enlarging” (i.e., Fund 300) the pipeline. This method for apportioning the cost is used when determining the cost of projects below.

Additionally, a 30% contingency was applied to the construction costs and an additional 10% was used to account for the engineering design and administration costs. These values were the same percentages used to quantify costs in previous planning efforts.

5.3 Existing CIPs

The cost estimates for the projects needed to address the existing wet weather capacity deficiencies (see section 4.1) are described below in Table 3.

Table 3. Summary of Existing System Improvements

ID	Sewer Trunk	Existing Diameter(s)	Proposed Diameter(s)	Length (LF)	SECAP Cost (\$)	R&R Cost (\$)	Total Cost (\$)
1	Foothill	12"	24"	2275	2,861,250	953,750	3,815,000
-	Atherton Trunk	20"	24"	800	NA	NA	NA
Total Costs					2,861,250	953,750	3,815,000

The Foothill Trunk Sewer Replacement Project corrects a restriction in capacity within the District’s system that has existed for some time. The project will replace a section of 12-inch diameter pipeline situated between a section of 15-inch diameter and 24-inch diameter pipelines. The lack of sufficient capacity in this portion of the system is due partly to the smaller diameter pipe segments and the fact that many of the pipe segments of this trunk were constructed with minimum slopes. Design for this construction project began in October 2014.



Challenges with permitting delayed construction. Permits were issued in late 2019 and the project was advertised for bids. A contractor is currently under contract to complete the Foothill Trunk Sewer Replacement Project by the end of 2020.

The Atherton Trunk Sewer Replacement Project is included in Table 3 for reference. The costs for this project are not included in this analysis because this project will be completed by the City of Rocklin. In accordance with City of Rocklin Resolution 2014-15 “Resolution of the City Council of the City of Rocklin Approving and Authorizing the City Manager to Execute an Agreement with South Placer Municipal Utility District for the Funding and Construction of the Atherton Sewer Trunk Upgrade Project” the City adopted a development impact fee to fund this improvement. Per the agreement, the City is responsible to construct this replacement project when a specified number of EDUs connect to the system upstream. The City has begun design of this project and intends to construct it in 2020. The modeled system assumed the proposed diameter of 24 inches for all simulations.

5.4 Mitigation CIPs

Previous capacity planning efforts included mitigation projects to correct identified capacity deficiencies within the collection system. The Loomis Diversion Project was previously identified as a mitigation project that would divert flow away from the Lower Loomis Trunk Sewer which was at risk of releasing sewer during design storm conditions. The Loomis Diversion Project was completed and accepted by the District in January 2019.

No new mitigation projects are proposed as part of the 2020 SECAP.

5.5 Near-Term CIPs

The improvement projects listed in Table 5 address the near-term wet weather capacity deficiencies described in section 4.2.

Table 4. Summary of Near-Term System Improvements

ID	Sewer Trunk	Existing Diameter	Proposed Diameter	Length (LF)	SECAP Cost (\$)	R&R Cost (\$)	Total Cost (\$)
2	Boyington Diversion	-	12"	3,240	1,390,293	-	1,390,293
Total Costs					1,390,293	-	1,390,293

The Boyington Diversion Trunk extends from the upstream end of the Loomis Diversion to Boyington Road. The trunk sewer will allow from the abandonment of two sewer lift stations (i.e., Boyington Lift Station and Silver Ranch Lift Station). This trunk sewer is expected to be located in a proposed frontage road along Interstate 80. This trunk sewer will likely be constructed with the development of the property on which it will be located. However, if needed, the District may elect to construct this facility prior to development of the property to realize the benefit of abandoning two lift stations.



5.6 Long-Term CIPs

The results of the model simulation of the long-term scenario indicate the need for significant improvements to the collection system. Table 6 contains the list of proposed improvements to provide capacity for long-term development. The names of the projects have been revised from previous SECAP documents to better represent the project location. This includes removing references to businesses no longer in operation and using creeks and street names where possible. The ID in the table below corresponds to the number for each project shown in Exhibit 7 in Appendix A. Exhibit 7 shows the extent of the required improvements to address deficiencies identified during the model simulation of the long-term scenario and the result those improvements have on the capacity of the system after they have been implemented.

Table 5. Summary of Long-Term System Improvements

ID	Sewer Trunk	Existing Diameter	Proposed Diameter	Length (LF)	SECAP Cost (\$)	R&R Cost (\$)	Total Cost (\$)
3	Springview Drive	24"	30"	1,170	320,432	569,656	890,008
4	SPMUD Corp Yard	30"	36"	930	89,603	115,204	763,556
5	Woodside	27"	36"	1,150	1,359,111	1,747,428	204,807
6	Lower Secret Ravine A	27"	36"	2,750	709,985	567,988	3,106,539
7	Lower Secret Ravine B	24"	36"	1,260	1,533,569	2,726,344	1,277,974
8	Lower Secret Ravine C	24"	30"	4,680	753,375	602,700	4,259,913
9	Lower Secret Ravine D	18"	27"	1,530	506,247	1,401,915	1,356,075
10	Schriber / Black Willow	18"	21"	7,950	811,647	1,844,653	1,908,162
11	Sucker Ravine B	15"	18"	4,800	1,396,757	2,483,123	2,656,301
12	Bankhead A	12"	15"	8,290	453,224	180,164	3,879,880
13	Bankhead B	8"	15"	1,290	1,619,546	1,295,637	633,388
14	Upper Antelope Creek East A	8"	12"	7,220	89,603	115,204	2,915,182
15	Aguilar Creek B	10"	12"	5,300	1,160,944	2,638,509	3,799,452
16	Antelope Creek A	18"	27"	3,120	3,043,333	2,434,667	5,478,000
17	Antelope Creek B	18"	24"	3,730	1,375,418	1,768,395	3,143,813
18	Antelope Creek C	10"	15"	3,260	1,052,818	842,254	1,895,072
19	Clover Valley	8"	15"	6,250	3,047,101	1,211,270	4,258,371
Total Costs					19,466,418	22,960,153	42,426,571



5.7 New Sewer Trunks

Table 7 lists the proposed new sewer trunks that will need to be constructed to convey flow from future development. The alignments, sizes, and lengths of new sewer trunks were originally obtained from the District’s 2009 and 1986 master plans and updated with this SECAP to reflect current plans.

Table 6. Summary of New Trunk Sewers

ID	Sewer Trunk	Proposed Diameter	Length (LF)	SECAP Cost (\$)	R&R Cost (\$)	Total Cost (\$)
20	Sierra College Trunk	24"	6,660	4,795,200	-	4,795,200
21	Cameo Trunk	15"	2,600	1,170,000	-	1,170,000
22	Upper Clover Valley A	10"	6,000	1,800,000	-	1,800,000
23	Upper Antelope Creek	15"	13,700	6,165,000	-	6,165,000
24	Upper Antelope Creek West	8"	7,700	1,848,000	-	1,848,000
25	Upper Antelope Creek Middle A	10"	5,370	1,611,000	-	1,611,000
26	Upper Antelope Creek Middle B	8"	7,600	1,824,000	-	1,824,000
27	Loomis East	8"	11,600	2,784,000	-	2,784,000
28	Brace Road Pump Station		EA	3,000,000	-	3,000,000
29	Brace Road East	12"	7,840	2,822,400	-	2,822,400
30	Horseshoe Bar Road East	10"	9,210	2,763,000	-	2,763,000
Total Costs				30,582,600	-	30,582,600

Two of the proposed new trunk sewer projects are new to the District’s planning documents. Although these projects are documented for the first time in this SECAP, they have been contemplated by District staff for many years and discussed with the potentially affected property owners for many years as well. These projects are the Sierra College Trunk and the Cameo Trunk.

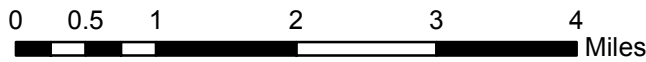
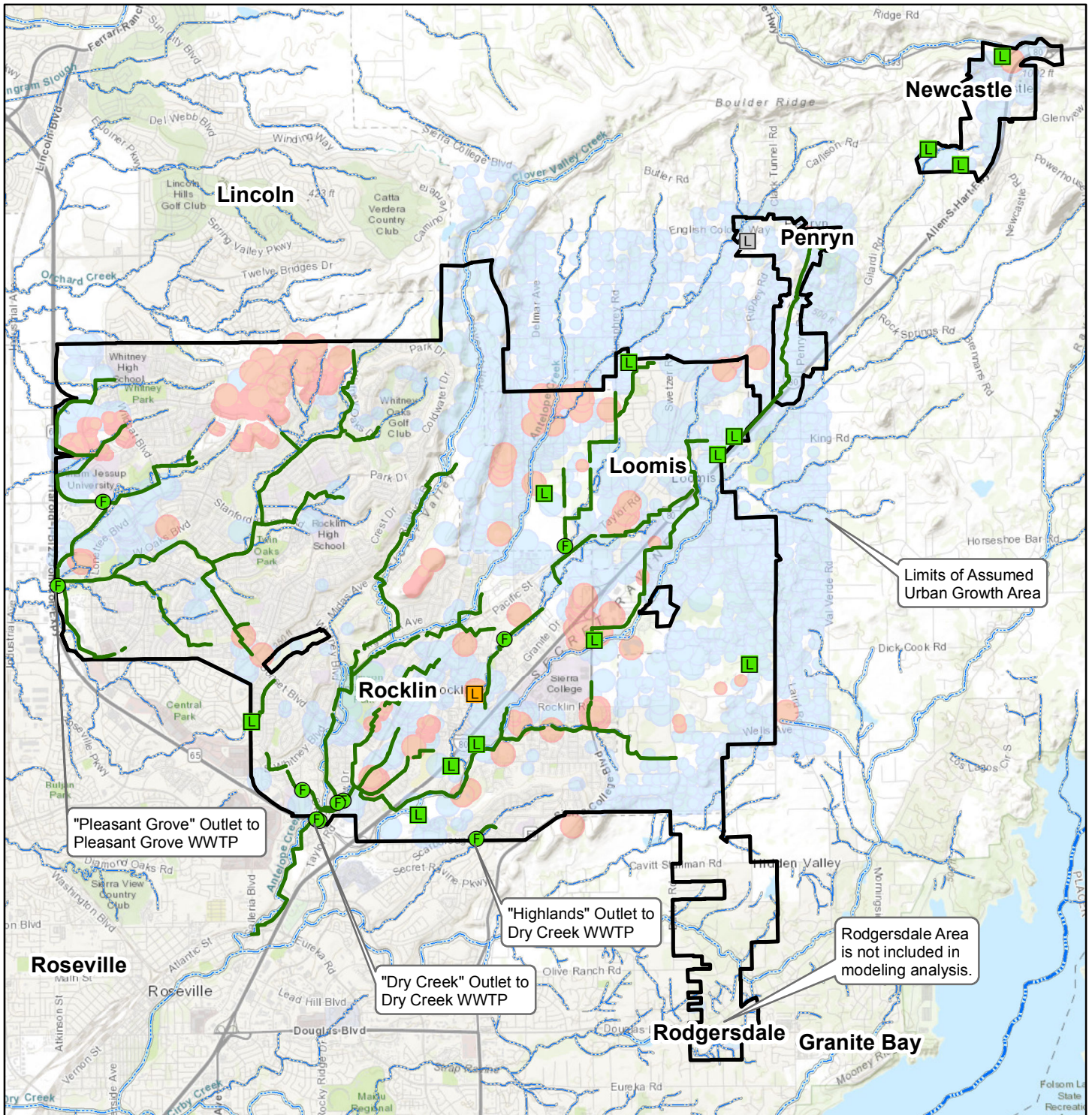
The Sierra College Trunk is a new pipeline that would run through the Sierra College property from the Sierra College Lift Station at Sierra College Boulevard and Schriber Way to the intersection of Rocklin Road and Aguilar. This trunk sewer would better serve Sierra College, allowing the college to abandon multiple private pump systems. This trunk sewer would also allow the District to abandon the District-owned Sierra College Lift Station and convey all flow that currently enters the lift station by gravity.

The Cameo Trunk Sewer is a new pipeline that would run from the District-owned Cameo Court Lift Station to the City of Roseville trunk sewer system on the west side of Stanford Ranch Road. The project would include the construction of on-site storage to provide attenuation of peak flow during storm events and the replacement of approximately 2,700 feet of existing City of Roseville sewer with 15-inch diameter pipe. Capacity in the City of Roseville system has been preliminarily investigated and, at the time, there was capacity in the downstream system. These results will need to be verified and further coordination will be required with the City of Roseville for this project to move forward.



CHAPTER 6: Appendix A

- Exhibit 1 –South Placer Municipal Utility District Service Area
- Exhibit 2 – Summary of Average Dry Weather Diurnal Curves against Modeled Results
- Exhibit 3 – Existing ADWF
- Exhibit 4 – Existing PWWF (10-year, 6-hour Design Storm)
- Exhibit 5 – Near-Term PWWF (10-year, 6-hour Design Storm)
- Exhibit 6 – Long Term PWWF (10-year, 6-hour Design Storm)
- Exhibit 7 – Long Term PWWF with Proposed Improvements



Legend

- Lift Station
- Flow Recorder
- Stream
- Trunk Sewer
- Near-Term Connections
- Long-Term Connections
- District Boundary

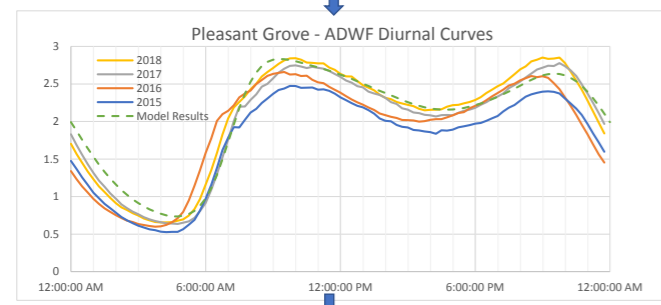
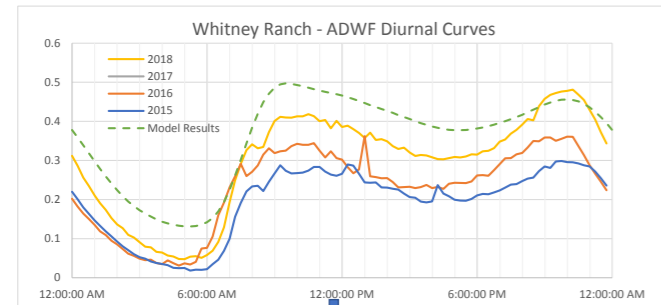
**South Placer Municipal Utility District
2020 System Evaluation and Capacity Assurance Plan**

**SPMUD
Service Area**

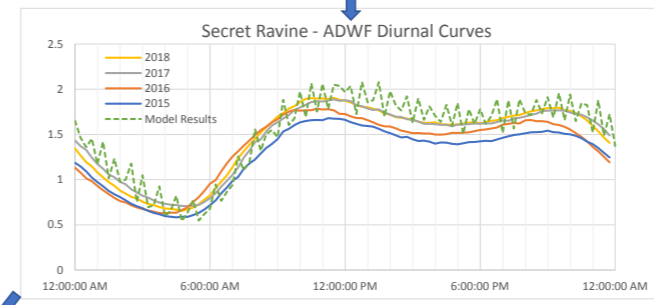
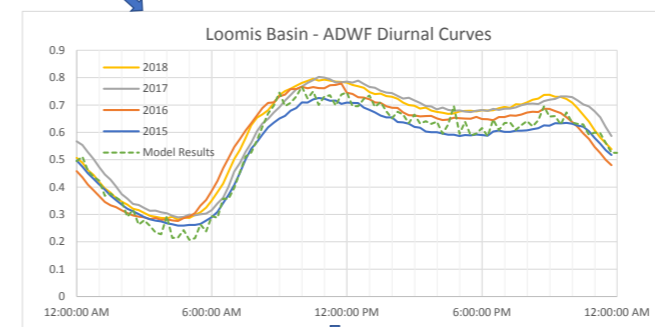
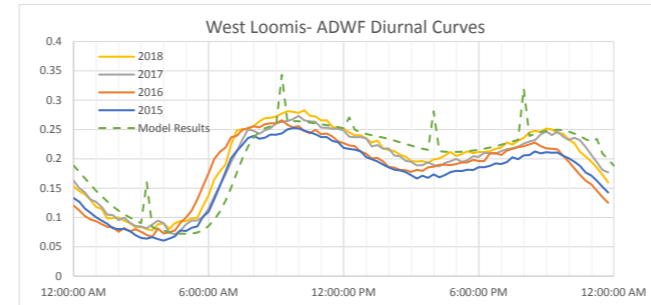


EXHIBIT 2

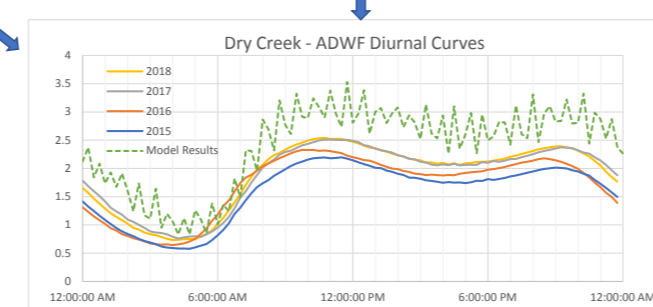
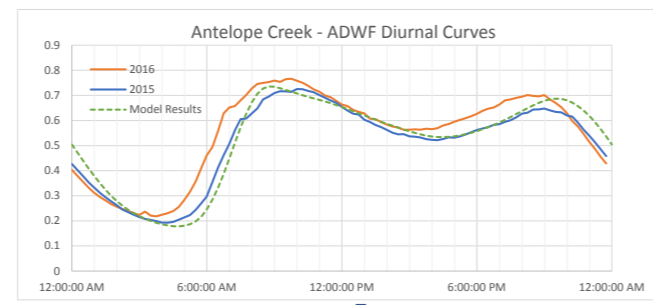
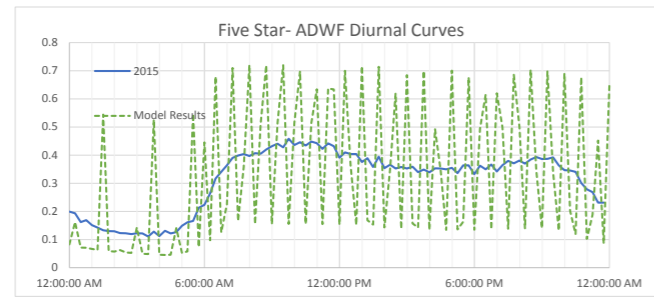
Summary of Average Dry Weather Diurnal Curves against Modeled Results



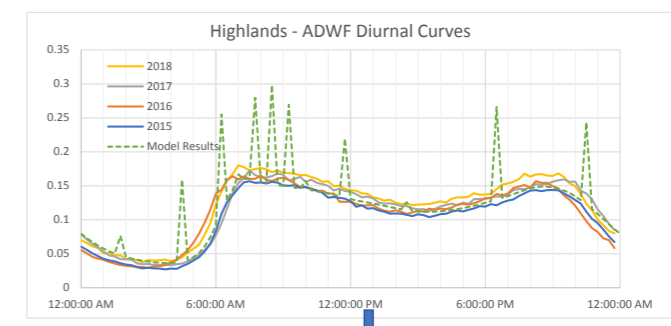
Pleasant Grove WWTP



Dry Creek WWTP



Dry Creek WWTP

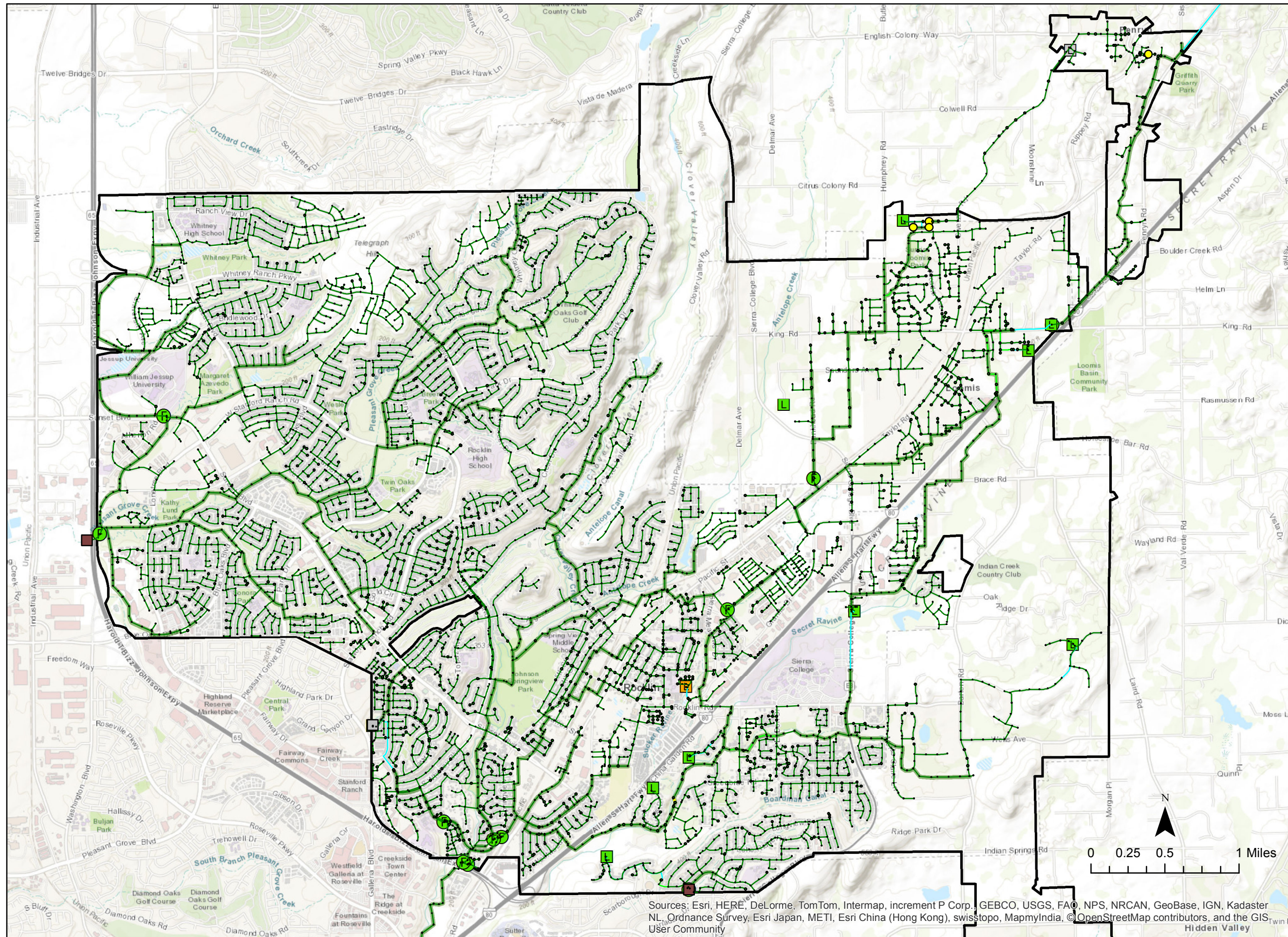


Notes: Flow rates are all in units of MGD.



South Placer Municipal Utility District
2020 System Evaluation and Capacity Assurance Plan

Existing ADWF



Legend

Manhole Freeboard (ft)

- Less than 0
- 0~1
- 1~3
- 3~6
- Greater than 6

Gravity Main Maximum d/D

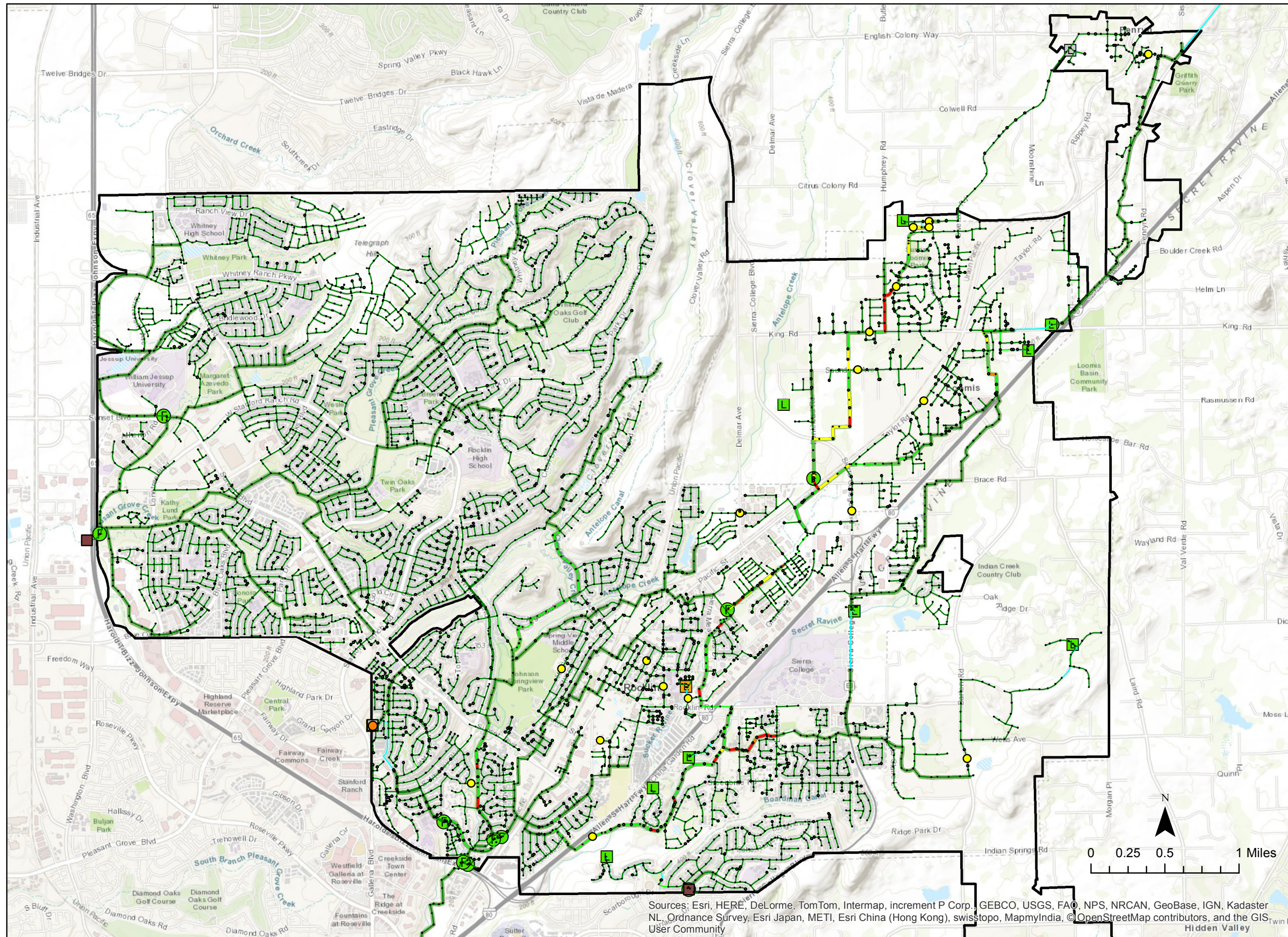
- Less than 0.5
- 0.5~0.7
- 0.7~0.8
- 0.8~0.99
- Greater than 0.99

Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, ©OpenStreetMap contributors, and the GIS User Community



South Placer Municipal Utility District
2020 System Evaluation and Capacity Assurance Plan

Existing PWWF



Legend

Manhole

Freeboard (ft)

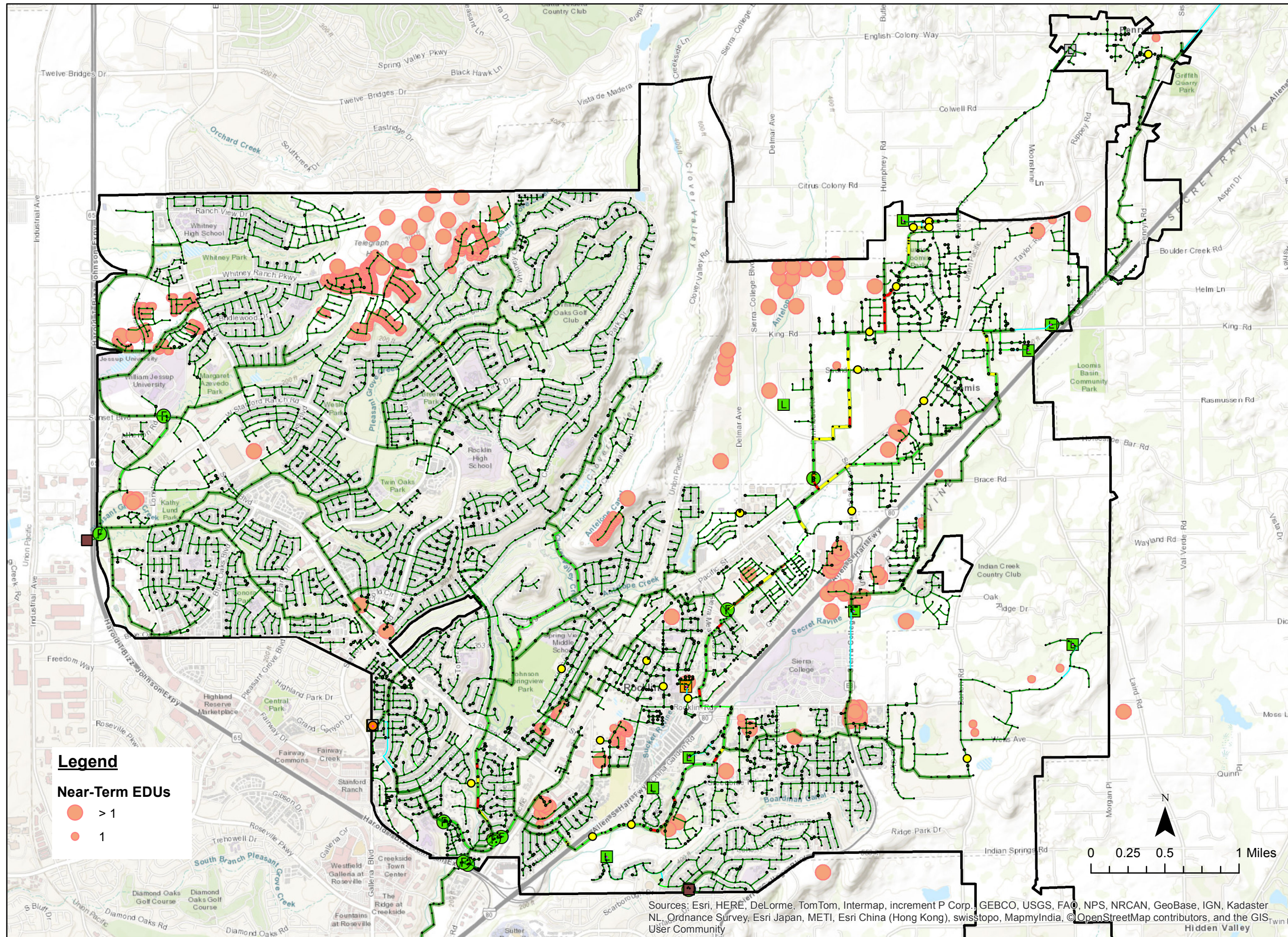
- Less than 0
- 0~1
- 1~3
- 3~6
- Greater than 6

Gravity Main

Maximum d/D

- Less than 0.5
- 0.5~0.7
- 0.7~0.8
- 0.8~0.99
- Greater than 0.99

Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, ©OpenStreetMap contributors, and the GIS User Community



South Placer Municipal Utility District
2020 System Evaluation and Capacity Assurance Plan

Near-Term PWWF

Legend

Manhole Freeboard (ft)

- Less than 0
- 0~1
- 1~3
- 3~6
- Greater than 6

Gravity Main Maximum d/D

- Less than 0.5
- 0.5~0.7
- 0.7~0.8
- 0.8~0.99
- Greater than 0.99

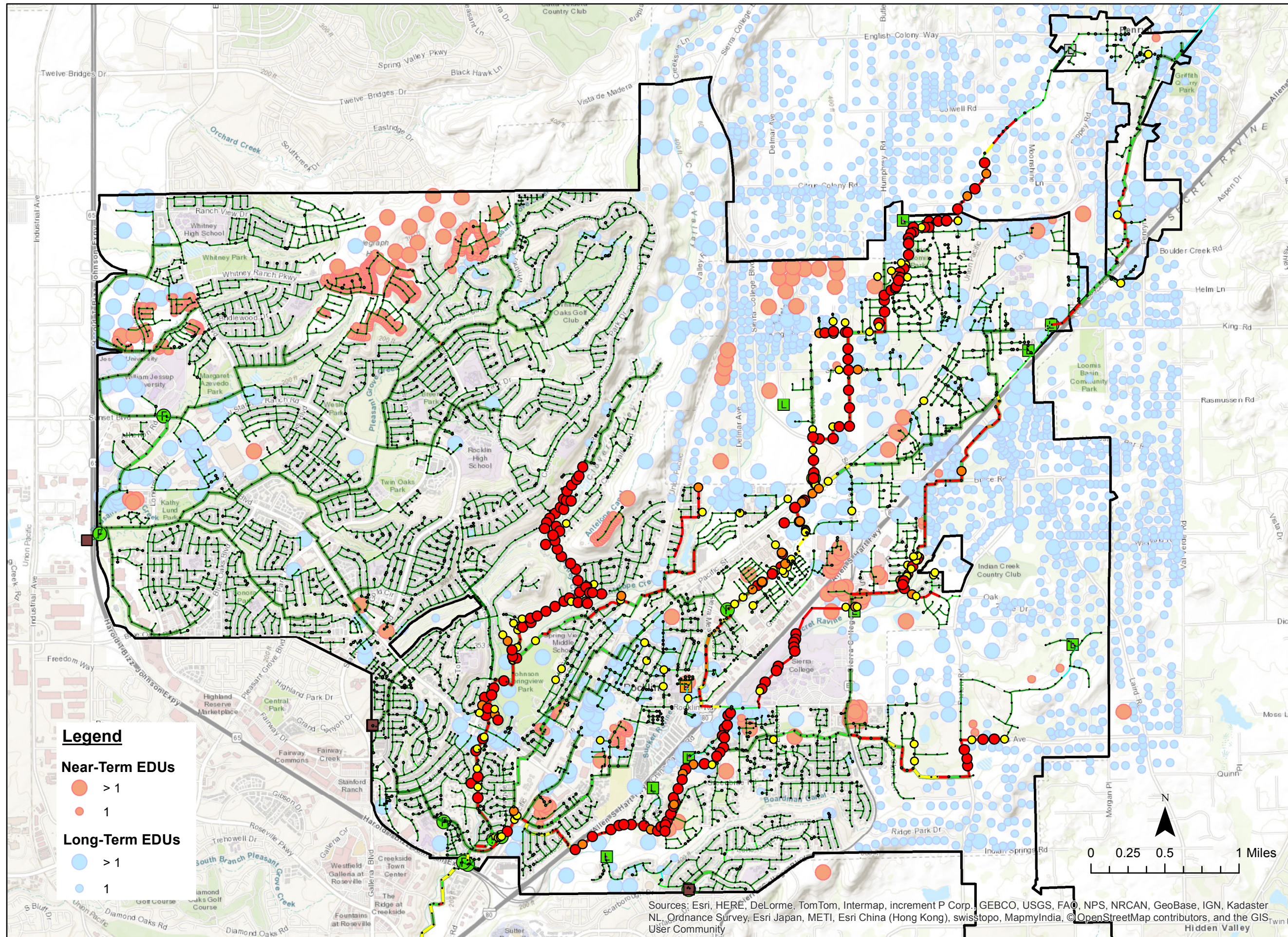
Legend
Near-Term EDUs
● > 1
● 1

Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, ©OpenStreetMap contributors, and the GIS User Community



South Placer Municipal Utility District
2020 System Evaluation and Capacity Assurance Plan

Long-Term PWWF



Legend

Near-Term EDUs

- > 1
- 1

Long-Term EDUs

- > 1
- 1

Legend

Manhole Freeboard (ft)

- Less than 0
- 0~1
- 1~3
- 3~6
- Greater than 6

Gravity Main Maximum d/D

- Less than 0.5
- 0.5~0.7
- 0.7~0.8
- 0.8~0.99
- Greater than 0.99

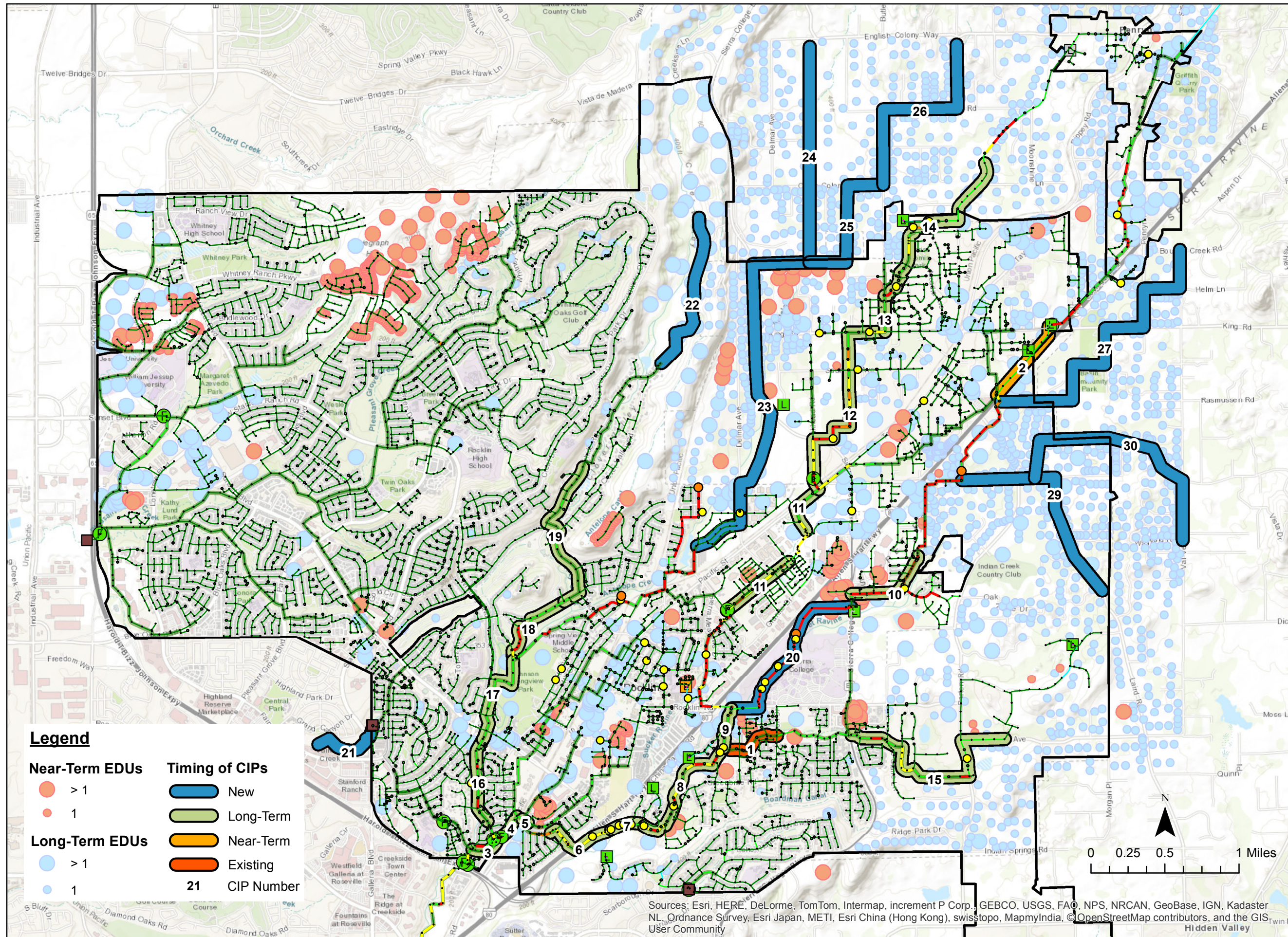
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South Placer Municipal Utility District
2020 System Evaluation and Capacity Assurance Plan

Long-Term PWWF

with Proposed Improvements



Legend

Near-Term EDUs	Timing of CIPs
● > 1	■ New
● 1	■ Long-Term
Long-Term EDUs	■ Near-Term
● > 1	■ Existing
● 1	■ 21 CIP Number

Legend

Manhole Freeboard (ft)

- Less than 0
- 0~1
- 1~3
- 3~6
- Greater than 6

Gravity Main Maximum d/D

- Less than 0.5
- 0.5~0.7
- 0.7~0.8
- 0.8~0.99
- Greater than 0.99

Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, ©OpenStreetMap contributors, and the GIS User Community

**SOUTH PLACER MUNICIPAL UTILITY DISTRICT
STAFF REPORT**

To: Board of Directors

From: Eric Nielsen, Assistant Superintendent
Carie Huff, District Engineer

Cc: Herb Niederberger, General Manager

Subject: 2020 Sewer Participation Fee Nexus Study

Meeting Date: February 6, 2020

Overview

In addition to upsizing existing trunk sewers, new backbone infrastructure and capital facilities will be required to meet the demands of future development within the District’s Service Area Boundaries. In 2015, the District implemented a development impact fee program for these sewer projects and collects fee revenues as development occurs to pay for system expansion.

The fee program is compliant with the regulations set forth in the Mitigation Fee Act (also commonly referred to as AB 1600) and ensures that a rational nexus exists between future development area, and: 1) the use and need of the proposed infrastructure; and 2) the amount of the fee assigned to future development. This Nexus Study demonstrates that a reasonable relationship exists between the fee to be levied on each type of land use and the cost of the facilities attributable to that land use.

Recommendation

Staff recommends the Board of Directors adopt Resolution No. 20-07 accepting the Sewer Participation Fee Nexus Study dated January 2020.

Strategic Plan Goal

This action is consistent with SPMUD Strategic Plan Goals:

- Goal 4.1: Maintain compliance with pertinent regulations.
- Goal 5.1: Maintain wastewater rates sufficient to meet financial needs, operational demands, regulatory requirements and customer expectations.

Related District Ordinances and Policies

This action relates to the following SPMUD Ordinances and Policies:

- Ordinance 17-03: Sewer Participation Fee

Fiscal Impact

The Nexus Study determines the cost of the participation fees that are required for each future connection or change in density. These fees are the source of revenue for Fund 300 and fund the projects identified in the District’s System Evaluation and Capacity Assurance Plan.

Attachments:

- Resolution 20-07 – Making Findings and Accepting the Nexus Study for the Sewer Participation Charge
 - Exhibit A - South Placer Municipal Utility District 2020 Sewer Participation Fee Nexus Study

SOUTH PLACER MUNICIPAL UTILITY DISTRICT

RESOLUTION NO. 20-07

**MAKING FINDINGS AND ACCEPTING THE NEXUS STUDY
FOR THE SEWER PARTICIPATION CHARGE**

WHEREAS, the South Placer Municipal Utility District (District) has evaluated the hydraulic capacity of the collection system under various scenarios to assure capacity for existing customers and to obtain information to prepare for future development; and

WHEREAS, The District desires to establish a sewer participation charge to be used to fund the fair share portion of the cost of construction of the trunk sewer upgrades and expansion facilities that have been identified by the District as necessary to serve certain new development within the District's service area boundaries; and.

WHEREAS, the Mitigation Fee Act, Section 66000 et seq. of the State of California Government Code, requires that all public agencies make findings and satisfy the requirements when establishing, increasing, or imposing a fee as a condition of approval of a development project; and

WHEREAS, the District has prepared the Sewer Participation Charge Nexus Study that meets the requirements of the Mitigation Fee Act.

NOW, THEREFORE BE IT RESOLVED that the Board of Directors of the South Placer Municipal Utility District hereby accepts the Sewer Participation Charge Nexus Study attached hereto as Exhibit "A" and incorporated by this reference and adopt the findings therein stated.

PASSED AND ADOPTED at a Regular Meeting of the South Placer Municipal Utility District Board of Directors at Rocklin, CA this 6th day of February 2020.

Signed: _____
John R. Murdock, President of the Board of Directors

Attest: _____
Emilie Costan, Board Secretary



Sewer Participation Fee Nexus Study

South Placer Municipal Utility District

Prepared by:
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January 2020



ORGANIZATION OF THE NEXUS STUDY

This study has been organized into the following sections:

Section	Description	Page
I	Introduction, Background, Purpose of the Fee and the Mitigation Fee Act	2
II	Provides a detailed explanation of the fee methodology used to calculate the fees in the Fee Program	5
III	Defines the land use and demand assumptions used in the detailed calculations and in the application of the Fee Program	7
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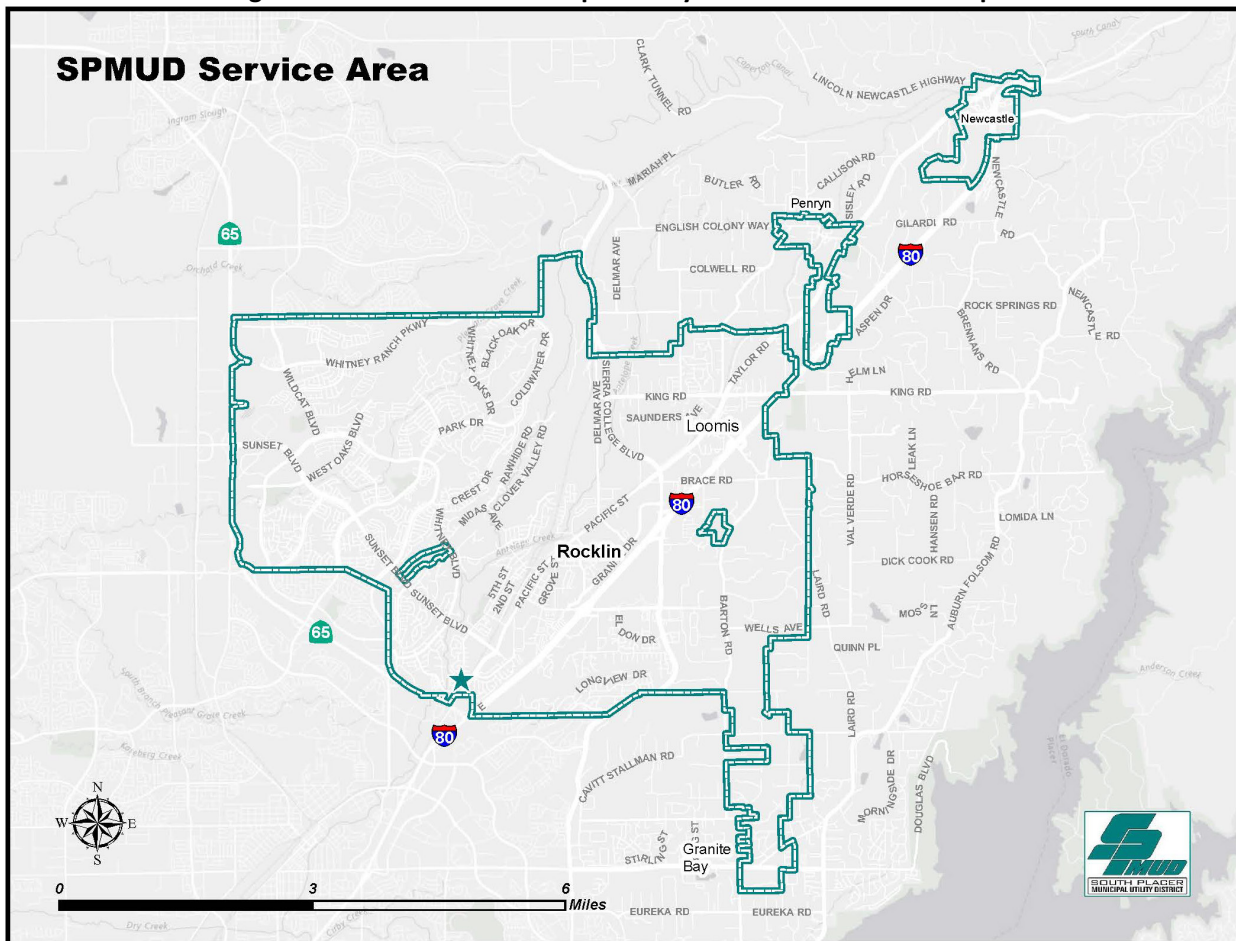


SECTION I: INTRODUCTION

Background

South Placer Municipal Utility District (District) serves the communities of Rocklin, Loomis, Penryn, Newcastle, and portions of Granite Bay and unincorporated Placer County. The District owns, operates, and maintains a collection system, which consists of approximately 280 miles of mainline pipe (ranging from 4-inch to 54-inches in diameter), over 6000 manholes, thirteen lift stations, and ten permanent flow monitoring stations. Figure 1, shows a map of the District service area as well as the area evaluated with the hydraulic model as part of the 2020 Wastewater Collection System Evaluation and Capacity Assurance Plan (SECAP). Included as Appendix A.

Figure 1 – South Placer Municipal Utility District Service Area Map



The purpose of the SECAP is to provide the District guidance in its efforts to assure capacity for existing customers and information on how to prepare and plan for future development. This document summarizes the District’s compliance with provision D.13.viii – System Evaluation and Capacity Assurance Plan of the California State Water Resources Control Board (SWRCB)



Order No. 2006-0003-DWQ, the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (SSS WDR). It is included by reference to the District's Sewer System Management Plan (SSMP); is reviewed annually; and is updated as deemed necessary by District staff (at minimum every five years) to account for conditions affecting collection system capacity. The evaluation summarized herein utilized previous District master planning efforts as its foundation, but the results stand alone as the District's current SECAP and 5-year planning document related to capacity.

The SECAP area coincides with the study area identified in the South Placer Municipal Utility District 2015 SECAP and the District's urban growth area (UGA). The UGA is identified in the South Placer Wastewater Authority (SPWA) Wastewater Systems Evaluation Project, which evaluated the combined systems of the regional partners discharging to the two regional wastewater treatment plants. It is important to note that the areas evaluated are the same, since one of the objectives of the SECAP is to build off of those previous planning studies to maintain consistency of analysis but replace the results with updated model simulation results.

The Rodgersdale community was not included in the hydraulic model for the same reasons it was not evaluated in the 2009 master plan or 2015 SECAP (i.e., the entire community is built out with no room for future development and according to District records, there are no existing capacity related issues). Additionally, the District sphere of influence (SOI), which represents the full extent of the District's potential service range, was not included in the hydraulic model. This is consistent with the foundational assumptions related to growth potential made in the previous hydraulic evaluations (i.e. the extension of the collection system into this area is not likely based on current planning projections, even under long-term scenarios.)

The City of Rocklin and Town of Loomis are located in Placer County approximately 20 miles northeast of Sacramento, along Interstate 80. Increased population and employment in Rocklin and Loomis will lead to increased demand on public infrastructure and services and will ultimately impact infrastructure and the facilities required to provide such services. Where backbone infrastructure and capital facilities are inadequate, permitting development is contrary to the responsibility of local government to protect the public's health, safety, and welfare. Consequently, the District has planned for the construction of backbone infrastructure and capital facilities that will adequately serve its existing areas as well as its future development.

Purpose of Study

New backbone infrastructure and capital facilities will be required to meet the demands of future development within the District's Service Area Boundaries, in addition to upsizing existing trunk sewers. The District has decided to implement a development impact fee program for these sewer projects and collect fee revenues as development occurs to pay for the system expansion.



The Fee Program is compliant with the regulations set forth in the Mitigation Fee Act (also commonly referred to as AB 1600) and ensures that a rational nexus exists between future development area, and: 1) the use and need of the proposed infrastructure; and 2) the amount of the fee assigned to future development. This Nexus Study demonstrates that a reasonable relationship exists between the fee to be levied on each type of land use and the cost of the facilities attributable to that land use.

Impact Fee Nexus Requirements (AB1600)

Assembly Bill (AB) 1600, which was enacted by the State of California in 1987, created the Mitigation Fee Act – Section 66000 et seq. of the Government Code. The Mitigation Fee Act requires that all public agencies satisfy the following requirements when establishing, increasing, or imposing a fee as a condition of approval of a development project:

1. Identify the purpose of the fee.
2. Identify the use to which the fee is to be put.
3. Determine how there is a reasonable relationship between:
 - a. The fee's use and the type of development project on which the fee is imposed.
 - b. The need for the public facility and the type of development project on which the fee is imposed.
 - c. The amount of the fee and the cost of the public facility or portion of the public facility attributable to the development on which the fee is imposed.

As stated above, the purpose of this Nexus Study is to demonstrate that the proposed sewer project fee complies with the Mitigation Fee Act. The assumptions, methodologies, facility standards, costs, and cost allocation factors that were used to establish the nexus between the fees and the development on which the fees will be levied are summarized in subsequent sections of this study.



SECTION II: FEE METHODOLOGY

When development impact fees are calculated, an analysis must be presented in enough detail to demonstrate that a logical, thorough consideration was applied in the process of determining how the fees relate to the impacts from new development. Findings must be made to ensure that there is a reasonable relationship between the fee and the development on which the impact fee will be levied. There are several generally accepted methods of determining impact fees for future development. The following is a discussion of the method used in this study to calculate the individual fees in the Fee Program.

The plan-based fee methodology utilized in this study is typically applied to infrastructure and capital facilities that must be designed based on future demand projections and/or the geographic location of anticipated growth. For example, the need for transportation improvements depends specifically on the future area that will be served. An analysis of existing facilities, geographic constraints, and current levels of service must be completed in order to identify future facility needs. This information is analyzed in conjunction with a projection of the amount and location of future development in order to determine the adequacy of existing facilities and the demand for new improvements that will be required.

The steps to calculate an impact fee under the plan-based fee methodology include the following:

Step 1 - Determine the future development anticipated to generate demand for new or upgraded infrastructure.

Step 2 - Identify the facilities needed to serve the anticipated growth and determine the cost of these facilities.

Step 3 - Subtract expected revenues that will be available from alternative funding sources, if any, to determine the net facilities cost that will be allocated to future development.

Step 4 - Select the applicable equivalent dwelling unit (EDU) factor that will be used to allocate facilities costs based on a reasonable relationship basis; apply EDU factors to each of the land uses based on their expected level of service demand.

Step 5 - Calculate the total EDUs that will be generated from future development for all land use categories by multiplying each land use type by its EDU factor and taking the sum of the EDUs.

Step 6 - Divide the total EDUs for each land use category by the total EDUs for all future land uses to determine each land use's percentage share of the total EDUs.



Step 7 - Multiply each land use's percentage share of the total EDUs by the applicable infrastructure or facilities cost to determine the cost attributable to each land use category.

Step 8 - Divide the cost attributable to each land use category by the quantity (i.e., dwelling units or building square feet) of each land use type to determine the fee for each residential or non-residential land use category.



SECTION III: LAND USES AND EDUs

The Mitigation Fee Act requires that a reasonable relationship exists between the need for public facilities and the type of development on which an impact fee is imposed. The need for public facilities is related to the level of service demanded, which usually varies in proportion to the number of residents or employees generated by a particular land use type. Therefore, land use categories have been defined in order to distinguish between relative impacts on the proposed sewer infrastructure. Fees in the Fee Program have been calculated on an equivalent dwelling unit basis for residential land use categories and per 1,000 square feet of building space for non-residential land use categories. For a more detailed breakdown of EDU determine by land use and customer type please consult Appendix B or the District's Sewer Code.

The District applies a number of equivalent dwelling units (EDUs) to its customers as they connect to the collection system in accordance with the current District Sewer Code. An EDU is a unit of measure that standardizes all land use types and represents a unit of flow (gallons per day), at a certain wastewater strength, from a single family residential unit. As an example how this could be applied to other types of land uses, a small business designed to discharge three times as much similarly characterized wastewater as an average single-detached dwelling would be assigned three EDUs.

The number of EDUs for each customer was used to calculate flows from each parcel into the collection system. To maintain a foundational capacity evaluation criterion consistent with previous planning studies, 190 gpd/EDU was applied as the unit flow factor throughout all model simulations.

Existing Development

The parcels connected to the existing collection system and the usage type of each parcel were identified using District records. Three main categories for usage type were applied in the model (i.e., residential, commercial, and mixed use). Diurnal patterns were developed for each of the usage types and applied to the flows generated from each parcel.

Model results from the existing dry weather simulation were used to compare against the recorded flow monitoring data to calibrate the model. This is a crucial step to assure that the model results accurately reflect the amount of flow observed in the system. The assumed flowrate per EDU used in the model matched well with the dry weather flows recorded by the flow monitors.

Near-Term Development

Parcels that are anticipated to be developed in the near-term were identified and assigned EDUs. The basis for identifying Near-Term Developments was the information from District records about specific development projects in the entitlement process or from designated land uses.



The following sources for future land use were identified in the 2009 master plan and these remain applicable for the SECAP.

- City of Rocklin Draft General Plan Update (Quad Knopf, Inc., October 2012)
- Town of Loomis General Plan (Crawford Multari & Clark Associates, July 2001)
- Placer County General Plan (Placer County, August 1994)
- Horseshoe Bar / Penryn Community Plan (August 1994)
- Granite Bay Community Plan (May 1989)

Long-Term Development – Ultimate Build-Out (UBO)

The long-term hydraulic loading of the model was completed by including all the developable parcels within the Urban Growth Area (UGA). This scenario models all parcels as contributing to the collection system and thus represents the ultimate build out of the UGA. The general plans referenced above, along with Placer County zoning information were used to determine the use and assumed hydraulic loading of long-term developments.

Many of the parcels designated as connecting to the collection system under the long-term scenario are in rural areas of the UGA. Many of the parcels currently contain residences that have individual septic systems and are located on large areas of land. Because of the lack of information about these parcels with respect to future development plans, it is difficult to definitively determine the eventual loading onto the system.

The modeled system assumed that parcels that currently contain residences or businesses will not develop (e.g., subdivide) in the future. Those residences/businesses will abandon their individual septic systems and connect to the District collection system when the District expands service into those areas. Currently vacant or undeveloped parcels were assumed to develop according to the Placer County zoning requirements regarding minimum parcel size to determine the future hydraulic loading.

The total EDUs for each scenario and their associated average dry weather flow are show in Table 1.

Table 1 – Summary of EDUs and Average Flowrates by Modeled Growth Scenario

Scenario	Total EDUs	Additional EDUS from Previous Scenario	ADWF (mgd)	AWWF (mgd)
Existing (2020)	34,530	-	4.62	8.67
Near-Term (2025)	37,315	2,785	5.15	9.70
Long-Term (2060)	46,850	9,535	6.95	15.99



SECTION IV: TRUNK SEWER EXPANSION COSTS

The District utilized the results of the 2020 SECAP to identify, quantify and prioritize the recommended Capital Improvement Projects (CIPs) and the associated impacts on services charges to existing customers to rectify existing capacity deficiencies and participation charges to build capacity to serve future developments. These CIPs were established and prioritized to develop a schedule of completion for the planned capital improvements projects. The schedule for planning, design and construction of the identified improvements shall be based on the District's analysis of risk of failure, actual pace of development, and location. CIPs relieving existing system deficiencies are the highest priority improvements, while CIPs related to future development shall be addressed by the District in coordination with submitted, approved, and constructed developments.

Project Cost Assumptions

The identified CIPs are consistent with much of the foundational sizing, slope and alignment that was identified in previous planning studies. District Resolution 18-22 established a schedule of values to be used for the valuation of sewer system assets. The schedule of values includes a baseline construction cost for open cut construction and options for trenchless construction methods. The schedule of values also includes additional costs for items such as extraordinary dewatering, hard rock conditions, productivity factors, and surface restoration. Project costs were developed for each proposed capital improvement project using this schedule of values.

Additionally, a 30% planning contingency was applied to the construction costs and an additional 10% was used to account for the engineering design and administration costs. These values are consistent with percentages used to quantify costs in foundational planning work. These planning costs are used to define the District's short-term (5-year) and long-term financial liabilities related to capacity improvements. The District intends to maintain this method of generating project costs so that the potential impact on charges levied by the District can be evaluated by comparing the periodic SECAP updates and refining services and participation charges to fund CIPs associated with existing customers and future development customers.

Current CIPs

The Foothill Trunk Sewer Replacement Project corrects a restriction in capacity within the District's system that has existed for some time. The project will replace a section of 12" diameter pipeline situated between a section of 15" diameter and 24" diameter pipelines. The lack of sufficient capacity in this portion of the system is due partly to the smaller diameter pipe segments and the fact that many of the pipe segments of this trunk were constructed with minimum slopes. Design for this construction project began in October 2014. Challenges with permitting delayed construction. Permits were issued in late 2019 and the project was advertised for bids. A contractor is currently under contract to complete the Foothill Trunk Sewer Replacement Project by the end of 2020.



Table 2 contains a list of the remaining projected mitigation projects and their associated costs. This SECAP assumed that these mitigation improvement projects would be constructed to convey flows from near-term and long-term development, in lieu of constructing the identified existing condition CIPs.

The Foothill Trunk Project is displayed in the figures in the SECAP, Appendix A.

Table 2 - Summary of Current Improvements

Trunk Sewer	Existing Diameter(s)	Proposed Diameter(s)	Length (LF)	SECAP Cost (\$)	R&R Cost (\$)	Total Cost (\$)
Foothill	12"	24"	2275	2,861,250	953,750	3,815,000
Atherton Trunk	20"	24"	800	NA	NA	NA
Total Costs				2,861,250	953,750	3,815,000

The Atherton Trunk Sewer Replacement Project is included in Table 2 for reference. The costs for this project are not included in this analysis because this project will be completed by the City of Rocklin. In accordance with City of Rocklin Resolution 2014-15 "Resolution of the City Council of the City of Rocklin Approving and Authorizing the City Manager to Execute an Agreement with South Placer Municipal Utility District for the Funding and Construction of the Atherton Sewer Trunk Upgrade Project" the City adopted a development impact fee to fund this improvement. Per the agreement, the City is responsible to construct this replacement project when a specified number of EDUs connect to the system upstream. The City has begun design of this project and intends to construct it in 2020. The modeled system assumed the proposed diameter of 24 inches for all simulations.

Near-Term CIPs

The improvement projects listed in Table 3 were developed to address the near-term wet weather capacity deficiencies described in the SECAP, Appendix A.

Table 3 - Summary of Near-Term System Improvements

Trunk Sewer	Existing Diameter	Proposed Diameter	Length (LF)	SECAP Cost (\$)	R&R Cost (\$)	Total Cost (\$)
Boyington Diversion	-	12"	3,240	1,390,293	-	1,390,293
Total Costs				1,390,293	-	1,390,293

The Boyington Diversion Trunk extends from the upstream end of the Loomis Diversion to Boyington Road. The trunk sewer will allow from the abandonment of two sewer lift stations (i.e., Boyington Lift Station and Silver Ranch Lift Station). This trunk sewer is expected to be located in a proposed frontage road along Interstate 80. This trunk sewer will likely be constructed with the development of the property on which it will be located. However, if



needed, the District may elect to construct this facility prior to development of the property to realize the benefit of abandoning two lift stations.

Long-Term CIPs

The results of the model simulation of the long-term scenario indicate the need for significant improvements to the collection system. Table 6 contains the list of proposed improvements to provide capacity for long-term development. The names of the projects have been revised from previous SECAP documents to better represent the project location. This includes removing references to businesses no longer in operation and using creeks and street names where possible. The ID in the table below corresponds to the number for each project shown in Exhibit 7 in Appendix A. Exhibit 7 shows the extent of the required improvements to address deficiencies identified during the model simulation of the long-term scenario and the result those improvements have on the capacity of the system after they have been implemented.

Table 4 - Summary of Long-Term System Improvements

Trunk Sewer	Existing Diameter	Proposed Diameter	Length (LF)	SECAP Cost (\$)	R&R Cost (\$)	Total Cost (\$)
Springview Drive	24"	30"	1,170	320,432	569,656	890,008
SPMUD Corp Yard	30"	36"	930	89,603	115,204	763,556
Woodside	27"	36"	1,150	1,359,111	1,747,428	204,807
Lower Secret Ravine A	27"	36"	2,750	709,985	567,988	3,106,539
Lower Secret Ravine B	24"	36"	1,260	1,533,569	2,726,344	1,277,974
Lower Secret Ravine C	24"	30"	4,680	753,375	602,700	4,259,913
Lower Secret Ravine D	18"	27"	1,530	506,247	1,401,915	1,356,075
Schriber / Black Willow	18"	21"	7,950	811,647	1,844,653	1,908,162
Sucker Ravine B	15"	18"	4,800	1,396,757	2,483,123	2,656,301
Bankhead A	12"	15"	8,290	453,224	180,164	3,879,880
Bankhead B	8"	15"	1,290	1,619,546	1,295,637	633,388
Upper Antelope Creek						
East A	8"	12"	7,220	89,603	115,204	2,915,182
Aguilar Creek B	10"	12"	5,300	1,160,944	2,638,509	3,799,452
Antelope Creek A	18"	27"	3,120	3,043,333	2,434,667	5,478,000
Antelope Creek B	18"	24"	3,730	1,375,418	1,768,395	3,143,813
Antelope Creek C	10"	15"	3,260	1,052,818	842,254	1,895,072
Clover Valley	8"	15"	6,250	3,047,101	1,211,270	4,258,371
Total Costs				19,466,418	22,960,153	42,426,571

New Sewer Trunks and Associated Improvements

Proposed new sewer trunks will need to be constructed to convey flow from future development. The alignments, sizes, and lengths of new sewer trunks were based on foundational data from



the District’s 2009 and 1986 master plans, which remained generally consistent with the SECAP current planning effort. Table 5 lists the costs for these new trunk sewers and associated improvements.

Table 5 - Summary of New Sewer Trunks

Trunk Sewer	Proposed Diameter	Length (LF)	SECAP Cost (\$)	R&R Cost (\$)	Total Cost (\$)
Sierra College Trunk	24"	6,660	4,795,200	-	4,795,200
Cameo Trunk	15"	2,600	1,170,000	-	1,170,000
Upper Clover Valley A	10"	6,000	1,800,000	-	1,800,000
Upper Antelope Creek	15"	13,700	6,165,000	-	6,165,000
Upper Antelope Creek West	8"	7,700	1,848,000	-	1,848,000
Upper Antelope Creek Middle A	10"	5,370	1,611,000	-	1,611,000
Upper Antelope Creek Middle B	8"	7,600	1,824,000	-	1,824,000
Loomis East	8"	11,600	2,784,000	-	2,784,000
Brace Road Pump Station		EA	3,000,000	-	3,000,000
Brace Road East	12"	7,840	2,822,400	-	2,822,400
Horseshoe Bar Road East	10"	9,210	2,763,000	-	2,763,000
Total Costs			30,582,600	-	30,582,600



SECTION V: TRUNK SEWER IMPACT FEE

This section of the study addresses the nexus requirements as they relate to the calculation of the trunk sewer fee. It also summarizes the required sewer facilities, estimated costs, and fee amounts.

Nexus Test

As discussed in the Section I of the Study, the Mitigation Fee Act - Section 66000 et seq. of the Government Code, requires that all public agencies satisfy the following requirements when establishing, increasing, or imposing a fee as a condition of development:

1. *Identify the purpose of the fee.* The purpose of the fee is to fund the trunk sewer upgrades and expansion attributable to the impact from new development.
2. *Identify the use of the fee.* The sewer participation fee will be used to fund the fair share portion of the cost of construction of the trunk sewer upgrades and expansion facilities that have been identified by the District as necessary to serve certain new development within the District's service area boundaries. These facilities are identified in Table 2 through 5 and are more thoroughly discussed in the District's SECAP.
3. *Determine how there is a reasonable relationship between the fee's use and the type of development project on which the fee is imposed.* The fee to construct trunk sewer upgrades and expansion facilities that have been identified by the District as necessary to serve certain new development within the District's service area boundaries and will be used to ensure that such facilities are available and have the capacity to serve the identified new residential and non-residential development.
4. *Determine how there is a reasonable relationship between the need for the public facility and the type of development project for which the fee is imposed.* The trunk sewer upgrades and expansion facilities that have been identified by the District as necessary to serve certain new development within the District's service area boundaries and will be needed as new residential and non-residential development generate additional sewage and increase the demand placed on existing facilities. The District has identified the facilities incorporated into Table 2 through 5 and contained in the SECAP as those that are necessary to serve certain future development within the District's service area boundaries.
5. *Determine how there is a reasonable relationship between the amount of the fee and the cost of the public facility or portion of the public facility attributable to the development on which the fee is imposed.* The trunk sewer upgrades and expansion facilities that have been identified by the District as necessary to serve certain new development within the District's service area boundaries. Facilities costs are allocated to future development



based on EDUs that were developed by the District. The allocated costs translate into fees that are calculated on a fair-share basis to residential and non-residential development. Future fee revenue is anticipated to be sufficient to fully fund the construction of these facilities.

Required Facilities and Estimated Costs

The total costs of the recommended Capital Improvement Projects (CIPs) that will be required to serve future development included in the Nexus Study is summarize in Table 6. As shown in this table, the net cost of these facilities is approximately \$76,020,785.

Table 6 – Total Trunk Sewer Expansion Costs

Capital Improvement Projects	Costs (\$)
Table 2 - Summary of Current Improvements	2,861,250
Table 3 - Summary of Near-Term System Improvements	1,390,293
Table 4 - Summary of Long-Term Lower Bound System improvements	19,466,418
Table 5 - Summary of New Sewer Trunks	30,582,600
Subtotal – Construction Costs	54,300,560
Contingency (30%)	16,290,168
Design/Administration (10%)	5,430,056
Total Capital Improvement Projects	76,020,785

Calculation of Sewer Participation Fee

In accordance with the SECAP (see Appendix A), and as discussed in Section III, for the purposes of quantifying future improvement costs, the long-term scenario best represents the current potential for growth within the UGA. The number of additional customers anticipated from the long-term lower bound scenarios is 12,320 new EDUs.

Following the recommendations in the SECAP, the total construction costs of the improvement plan to meet the long-term build out of the UGA is shown in Table 6 as \$76,020,785. Table 7 below represents the calculation of the resulting Sewer Participation Fee.

Table 7 – Calculation of Sewer Participation Fee

a) Total Capital Improvement Projects	\$ 76,020,785
b) Existing CIP Fund Balance 2019	\$ 26,407,335
c) CIP needing funds; Cash need to fund improvements (2019 dollars) [a-b]	\$ 49,613,450
d) Additional EDUs Long-Term, Lower Bound (2060)	12,320
e) Resulting Sewer Participation Fee [c/d]	\$ 4027/edu



SECTION VI: ONGOING ADMINISTRATION OF THE FEE PROGRAM

Fee Study Updates and Fee Adjustments

The fees may be adjusted in future years to reflect revised facility design, revised costs, receipt of funding from alternative sources, or changes in proposed or actual land uses. It is recommended that the District consider updating the Fee Study if circumstances have been materially affected by events such as those listed above. If it is determined that a Fee Study update is not necessary, then the fees will be inflated each year by the change in the index describe under Inflation Adjustments below.

Fee Implementation

According to the California Government Code, prior to levying a new fee or increasing an existing fee, an agency must hold at least one open and public meeting. At least ten days prior to this meeting, the agency must make data on infrastructure costs and funding sources available to the public. Notice of the time and place of the meeting and a general explanation of the matter are to be published in accordance with Section 6062a of the Government Code, which states that publication of notice shall occur for ten days in a newspaper regularly published once a week or more. The District may then adopt the new fees at the second reading.

Inflation Adjustments

All fees calculated in this study are reflected in year 2019 dollars. In addition to the periodic adjustments mentioned earlier, the fees should be adjusted each year in accordance with District Ordinance 17-03. Ordinance 17-03 states that the sewer participation fee shall be adjusted on July 1 of each year by the change in the average of the Construction Cost Index (20-City) and the Construction Cost Index (San Francisco, CA) as reported in the Engineering New Record for the preceding 12-month period ending in May.

Fee Program Administrative Requirements

The Government Code requires the District to report every year, and every fifth year, certain financial information regarding the fees. The District must make available within 180 days after the last day of each fiscal year the following information from the prior fiscal year:

1. A brief description of the type of fee in the account or fund.
2. The amount of the fee.
3. The beginning and ending balance in the account or fund.
4. The amount of the fee collected, and the interest earned.
5. An identification of each public improvement for which fees were expended and the amount of expenditures.
6. An identification of an approximate date by which time construction on the improvement will commence if it is determined that sufficient funds exist to complete the project.



7. A description of each interfund transfer or loan made from the account and when it will be repaid.
8. Identification of any refunds made once it is determined that sufficient monies have been collected to fund all fee-related projects.

The District must make this information available for public review and must also present it at the next regularly scheduled public meeting not less than 15 days after this information is made available to the public.

For the fifth fiscal year following the first deposit into the account or fund, and every five years thereafter, the District must make the following findings with respect to any remaining funds in the fee account, regardless of whether those funds are committed or uncommitted:

1. Identify the purpose to which the fee is to be put.
2. Demonstrate a reasonable relationship between the fee and the purpose for which it is charged.
3. Identify all sources and amounts of funding anticipated to complete financing any unfinished improvements.
4. Designate the approximate dates on which funding in item (3) above is expected to be deposited into the fee account.

As with the annual disclosure, the five-year report must be made public within 180 days after the end of the fiscal year and must be reviewed at the next regularly scheduled public meeting. The District must make these findings; otherwise, the law requires that the District refund the money on a prorated basis to the then current record owners of the development area subject to the fee.

South Placer Wastewater Authority



Financing Options for
Wastewater Revenue Refunding
Bonds, Series 2013
(2016 U.S. Bank Direct Placement)

65

January 30, 2020

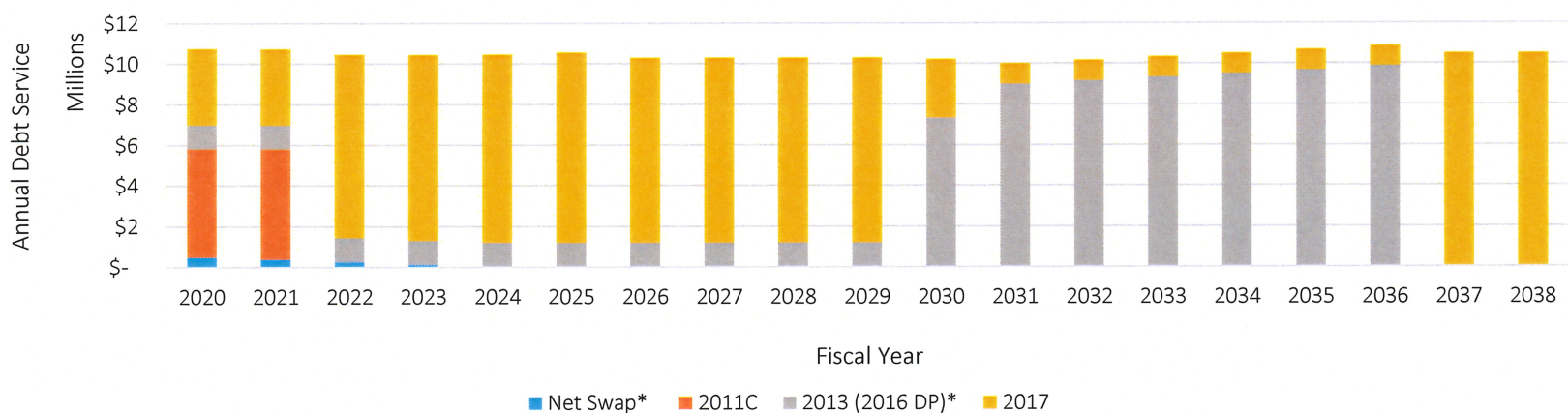
Presentation to SPWA Board

Summary of SPWA Outstanding Debt / Swaps

Series	Type	Issue Size	Outstanding	Callable	Interest Rate	First Call Date	Final Maturity	Expiration Date
2011C	Fixed	\$67,040,000	\$5,285,000	N/A	5.00%	N/A	11/1/2020	N/A
2013 (2016 DP)	Variable	59,330,000	59,330,000	59,330,000	70.5% of 1-Month + 0.55%	10/1/2017	11/1/2035	4/1/2020
2017	Fixed	74,780,000	74,780,000	29,580,000	5.00%	11/1/2027	11/1/2037	N/A
Total		\$201,150,000	\$139,395,000	\$88,910,000				

Effective Date	Counterparty	Notional Par Amount	Swap Fixed Rate Paid	Variable Rate Received	Final Maturity	Estimated Termination Value
9/17/2003	Morgan Stanley	\$20,430,000	3.665%	62% of 1-Month LIBOR + 26bps	11/1/2023	\$1.1 M (as of 1/23/20)

Aggregate Debt Service



*Assumes 2.00% LIBOR rate for calculation of Net Swap and 2016 DP payments

Scenario 1: Direct Placement Extension with U.S. Bank

- U.S. Bank, N.A. as the current holder of the 2016 DP proposed to Authority Staff an additional 2020 direct placement
 - 3.5 year term with a comparable financing structure to that of the 2016 DP, with slightly higher interest rate
 - Change in proposed interest rate formula will result in an additional estimated interest rate increase of 0.21% based on current interest rates
- Key Characteristics
 - Maintains proposed 2020 DP in variable rate mode
 - Maintains interest rate swap agreement
 - Current estimate of all-in cost is 2.04%, excluding the interest rate swap cost
 - Lowest upfront costs of issuance of scenarios provided
 - Resulting debt portfolio:
 - 57% fixed rate, 15% synthetic fixed rate, 28% unhedged variable rate

2016 Bond Extension	
Series	2013 (2016 DP)
Maturity Range	2029-2035
Refunded Par	\$59,330,000
Swap Termination	None
Projected Extension Results	
Par Amount	\$59,330,000
Estimated AIC	2.04%*
Est. AIC including Swap	4.15%*

*Assumes 2.00% LIBOR rate for calculation of Net Swap and 2016 DP payments

Scenario 2: Partial Fixed Rate Bond Refinancing

- Authority would issue fixed rate bonds to refund \$20.43 million of 2013 Bonds and pay the swap termination amount of ~\$1.1 million
- The remaining \$38.9 of 2016 Bonds would be refinanced by a variable rate debt instrument (SIFMA floating rate notes, variable rate demand bonds, or the U.S. Bank direct placement)
- Key Characteristics:
 - Reduces amount of outstanding variable rate bonds
 - Terminates interest rate swap agreement
 - Estimates of all-in cost depend on variable rate debt instrument selected but is currently ~2.30%
 - Highest upfront costs of issuance of scenarios provided
 - Resulting debt portfolio:
 - 71% fixed rate, 29% unhedged variable rate, no swap

Refunded Bonds	
Series	2013 (2016 DP)
<u>Fixed Rate Refunding</u>	
Par Refunded	\$20,430,000
Maturity Range	2029-2031
Swap Termination	~\$1.1 million
<u>Variable Rate Refunding</u>	
Par Refunded	\$38,900,000
Maturity Range	2032-2035
Projected Refunding Results	
Fixed Rate Par Amount	\$17,170,000
Variable Rate Par Amount	\$38,900,000
Est. Combined AIC	2.30%*
Est. NPV Savings of Fixed Rate Refunding	~\$800,000

*Assumes 2.00% LIBOR rate for calculation of Net Swap and 2016 DP payments

Scenario 3: Fixed Rate Bond Refinancing

- Refinancing all \$59,330,000 of 2016 DP into fixed rate bonds and paying ~\$1.1 million in swap termination costs
- Key Characteristics:
 - Refunds all variable rate bonds
 - Terminates interest rate swap agreement
 - Current estimate of all-in cost is 2.55%
 - Upfront costs of issuance higher than Scenario 1 but comparable to Scenario 2
 - Marginally higher debt service payments from FY 2021 - FY 2029 due to higher coupon rates for fixed rate bonds but lower debt service in FY 2030 - FY 2036
 - Approximately ~\$175,000 in refunding NPV savings
 - Resulting debt portfolio:
 - 100% fixed rate, no swap

Refunded Bonds	
Series	2013 (2016 DP)
Maturity Range	2029-2035
Refunded Par	\$59,330,000
Swap Termination	~\$1.1 million
Projected Refunding Results	
Par Amount	\$49,350,000
Estimated AIC	2.55%
Estimated NPV Savings of Fixed Rate Refunding	~\$175,000

*Assumes 2.00% LIBOR rate for calculation of Net Swap and 2016 DP payments

Potential Financing Timelines

2020 Direct Placement or Public Refunding Bond Sale

Week of	Extension of U.S. Bank DP	Refunding with Fixed Rate & Variable Rate	Fixed Rate Refunding
January 27	January 30 Authority Board Meeting		
February 3 & 10	Staff Preparation of Extension or Bond Documentation		
February 17	February 18 Authority Board Meeting to Approve Transaction		
March 2	-	Public Bond Sale	Public Bond Sale
March 16	Extension Docs Finalized	2020 Bonds Close	2020 Bonds Close
March 30	2020 Extension Closes	-	-

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ITEM VII.2 GENERAL MANAGER REPORT

To: Board of Directors
From: Herb Niederberger, GM
Date: February 6, 2020
Subject: General Manager Monthly Staff Report – January 2020

1) DEPARTMENT REPORTS

Attached are the monthly status reports for the Boards information:

- A. Administrative Services Department Report
- B. Field Services Department and
- C. Technical Services Department

The Department Managers are prepared to answer any questions from the Board.

2) INFORMATION ITEMS

- A. On January 15, 2020, the General Manager met District Legal Counsel to discuss: 1) Short Form Agreement for Professional Services, Materials and Supplies; 2) Gov Invest Agreement; 3) Compliance with Policy 3225 - Joint Use of Easements and Roads with the City of Rocklin; 4) PG&E Access Agreement; 5) District Railroad Management invoices; and 5) Land Transaction with the City of Rocklin, Lot A Tract 471, Book M, Page 33, & 3704 Antelope Way.
- B. On January 22, 2020, The General Manager along with Director Mitchell, District Engineer, Carie Huff and Assistant Superintendent, Eric Nielson, met with representatives from the City of Rocklin to discuss the possible joint use of District easement and roads with proposed City's bike trails.
- C. On January 30, 2020, the General Manager, along with President Mitchell, the District's representative on the South Placer Wastewater Authority (SPWA) Board. attended the meeting of the Authority's Board of Directors. The following items were discussed: 1) a Resolution adopting the Authority's 2020 calendar, 2) an update of the Capital Improvement Budget, and the status of the Pleasant Grove Wastewater Treatment Plant Upgrade; and 3) restructuring of the existing bonds.
- D. Advisory Committee Meetings:
There were no advisory committee meetings in January.

3) **PURCHASE ORDERS/CONTRACTS INITIATED UNDER GENERAL MANAGER AUTHORITY**

Date	Vendor	Product	Amount
01/19/2020	McCleod/Watts	Actuarial Determination Calculation and GASB 75 Reports	\$9550

4) **LONG RANGE AGENDA**

March 2010

Review Job Descriptions

June 2020

Approval of Employee's and Manager's MOUs
FY 2020/21 Budget Workshop

July 2020

Adopt FY 2020/21 Budget
Update on SPWA Issues

ITEM VII. ASD REPORT

To: Board of Directors

From: Emilie Costan, Administrative Services Manager

cc: Herb Niederberger, General Manager

Subject: Administrative Services Department Monthly Report

Board Date: February 6, 2020

Board Director Ethics & Harassment Training

AB 1234 requires that all local agency officials complete ethics training every 2 years. District Board members may register to attend a live Webinar training session on March 18, 2020 through CSDA or view an on-demand Webinar session that can be completed at any time through the Fair Political Practices Commission website or through CSDA.

AB 1661 requires all compensated local agency officials receive sexual harassment prevention training every 2 years. District Board members may register to attend a live Webinar training session on June 3, 2020 through CSDA or view an on-demand Webinar session that can be completed at any time through Cal Chamber or through CSDA.

Form 700 Statement of Economic Interest Filing

Form 700 notifications were sent via email to all designated Form 700 filers on 01/07/2020. Forms must be completed by 04/01/2020.

Laserfiche Records Management Software

Administrative Services Staff is working to import records into the new Laserfiche software application. Laserfiche staff has completed scanning of the paper Sewer Applications, Board Resolutions, Ordinances, and Board Minutes and is working to import the records for use by the District.

Year End Recertifications and Filings

The Administrative Services staff completed required year end recertification and filing requirements including Lil Affordable Rate Program Recertifications, the Secretary of the State Annual Registry and the State Controllers Annual Financial Report.

Annual Wellness Incentives

On January 24th, employees received their annual wellness incentives. Four (4) employees received the \$200 incentive for zero sick leave usage, and six (6) employees received the \$100 incentive for using less than 1% for the year.

Recruitment

The District has hired a new Engineering Technician and a new Regulatory Compliance Technician. Recruitment will begin at the end of February for an Administrative Services Assistant I/II/III to fill the position that will be vacated due to Tami's retirement.

To: Board of Directors
From: Sam Rose, Superintendent
Cc: Herb Niederberger, General Manager
Subject: Field Services Department Monthly Report
Meeting Date: February 6, 2020

Overview

This report provides the Board with an overview of Field Services operations and maintenance activities through 12/31/2019. The work listed is not all inclusive.

1. Lost Time Accidents/Injuries (OSHA 300)

- a. Zero (0)
 - i. 1217 days without a Lost Time Accident/Injury.

2. Safety/Training/Professional Development

- a. All Field employees participated in:
 - i. Two (2) "Tailgate" safety sessions.
 - ii. Welding / Hot Work Safety

3. Miscellaneous

- a. Received, and put into service, budgeted (replacement) CCTV Van/Equipment

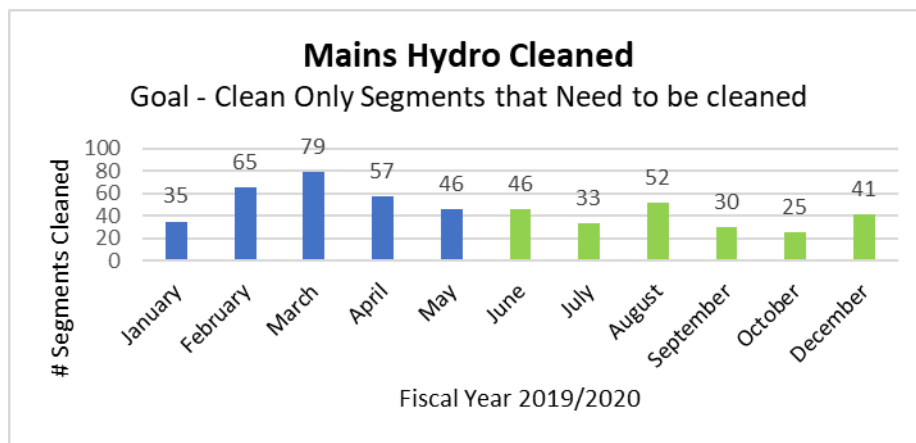
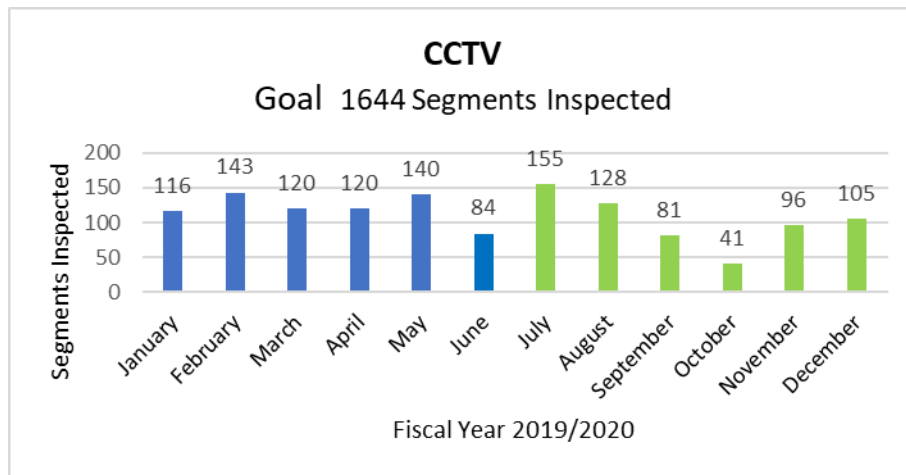
4. Customer Service Calls

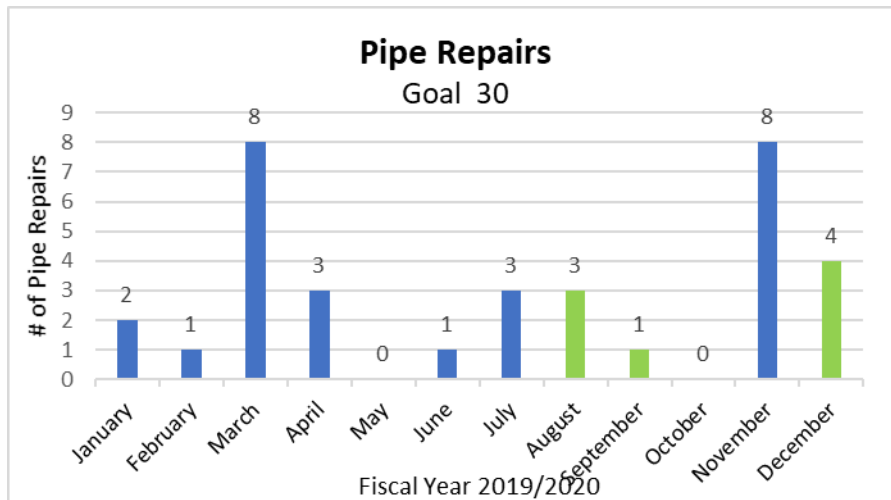
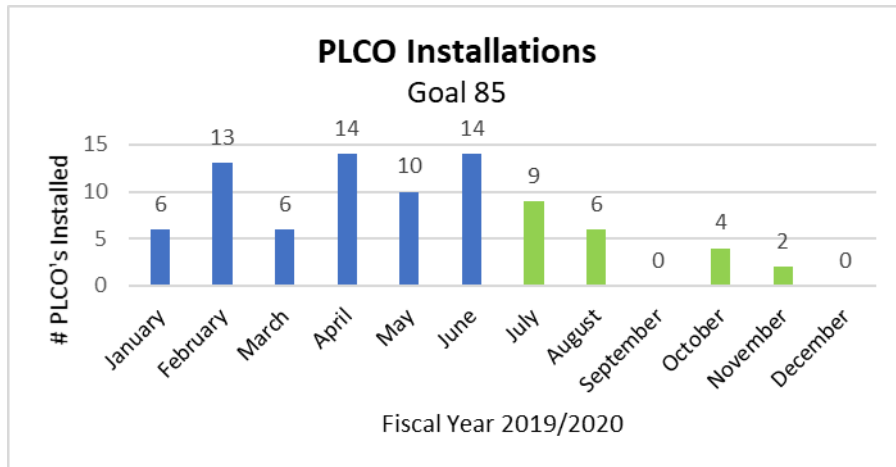
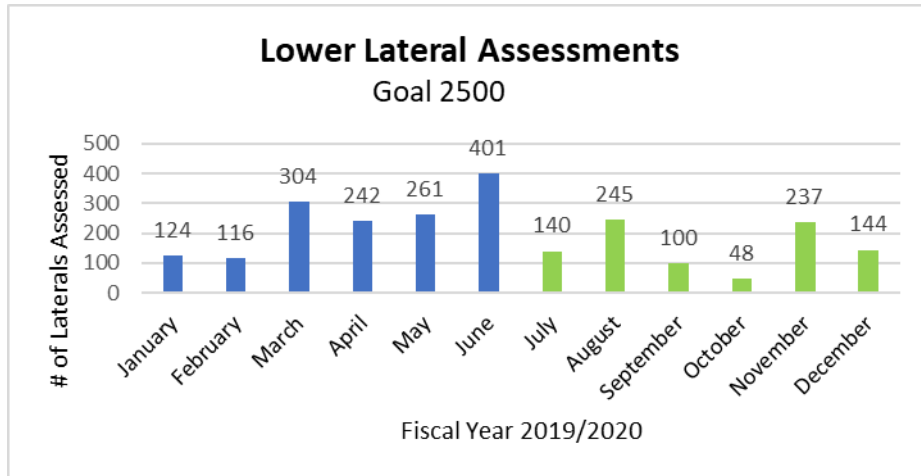
- a. Response Time Goals
 - i. 30 Minutes During Business Hours;
 - A. Average: 19 Minutes
 - ii. 60 Minutes During Non-Business Hours
 - A. Average: 40 Minutes
 - iii. 95% Success Rate
 - A. Success Rate for August – 100%

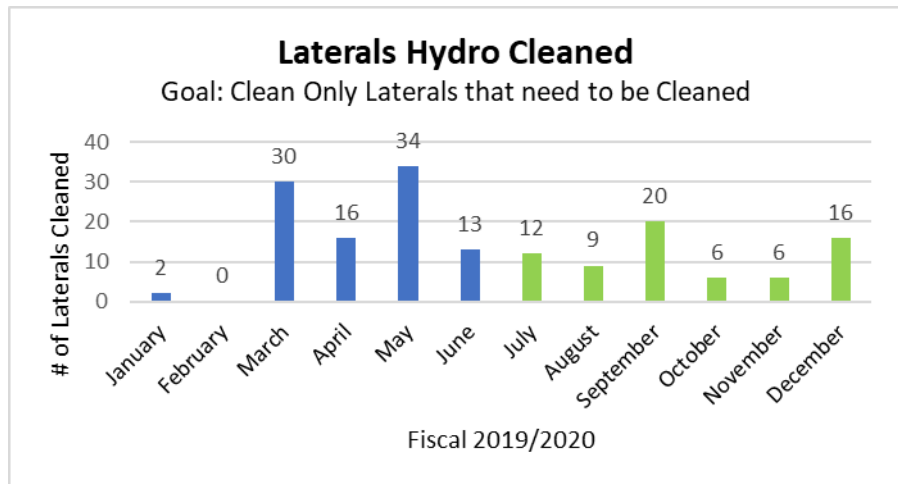
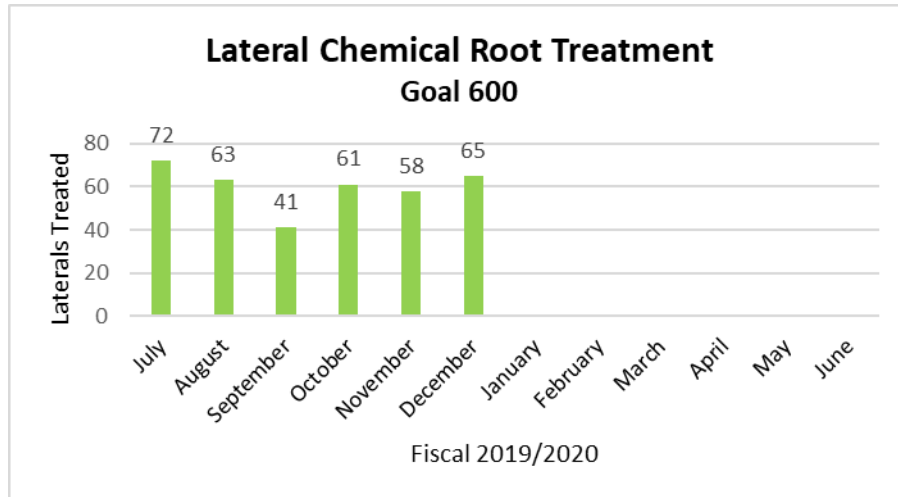
Service Calls						
Responsibility	SSO	Blockage	Odor	Misc	Vermin	Total Calls
SPMUD	0	4	0	0	0	4
Owner	2	13	0	0	0	15
Other			0	1	0	1
						20

5. Production

- a. The information provided below is not inclusive of all work completed.





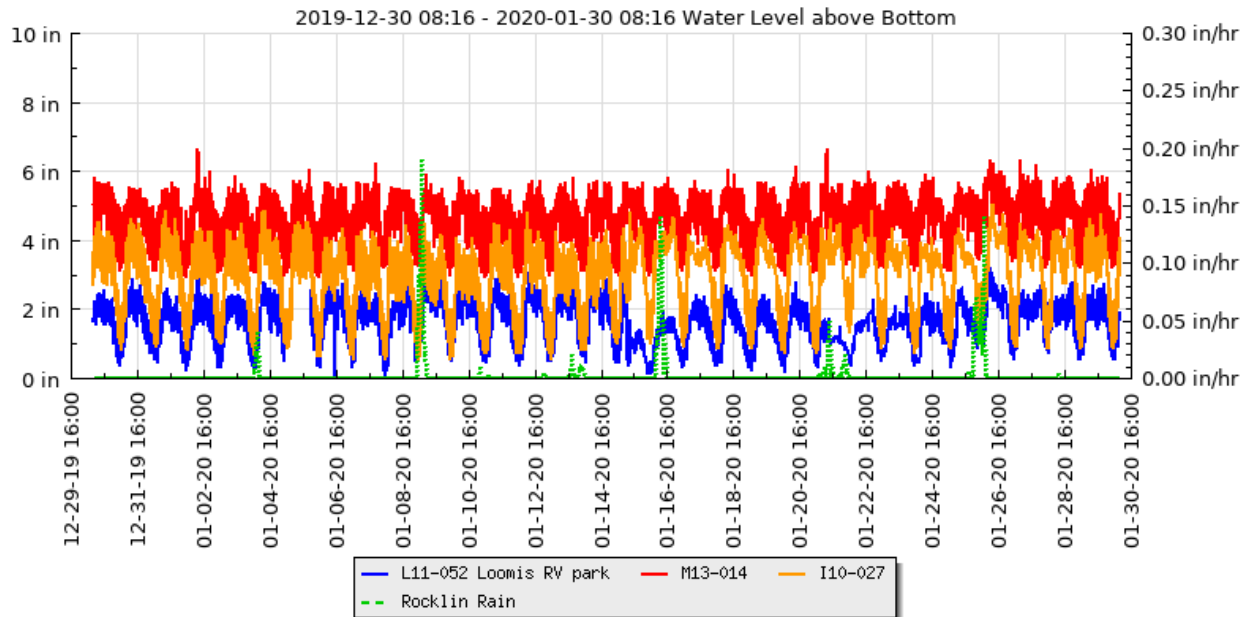


ITEM VII. TSD REPORT

To: Board of Directors
From: Carie Huff, District Engineer
Cc: Herb Niederberger, General Manager
Eric Nielsen, Assistant Superintendent
Subject: Technical Services Department Monthly Report
Board Date: February 6, 2020

Foothill Trunk Sewer Replacement Project

The Foothill Trunk Sewer Replacement Project was awarded at the January 9th Board meeting and the project is moving forward with the Notice of Award, updating tree permits and meeting UAIC requirements.



Engineering Technician Position

The District’s new Engineering Technician, Josh Lelko, started on January 13th. Josh comes from PCWA with 16 years of experience and is proving to be an asset to the District.

Electronic Plan Checking

The District purchased electronic plan checking software (Bluebeam) in January and staff is in the process of transitioning to electronic plan checking. The Standards and Specifications and website will be updated to reflect electronic submittal requirements.

System Evaluation and Capacity Assurance Plan (SECAP)

The SECAP is complete and will be presented at the February 6th Board meeting.

Staff continues to provide information prepared during SECAP efforts to the South Placer Wastewater Authority (SPWA) in support of its effort to update the SPWA System Evaluation.

Training

Staff from the Technical Services Department will attend the CWEA Pretreatment, Pollution Prevention and Stormwater Conference on January 29th. The conference serves as an excellent opportunity to network with other jurisdictions facing similar challenges and opportunities with their FOG programs. District Staff are also assisting with portions of the conference.

FOG Program

District staff continues to strive to meet the performance goals as well as work with food services establishments to comply with the FOG program. With the recent increase in non-compliant establishments, District staff has been focusing their efforts on making site visits to these establishments to regain a compliant status. Staff reports that in most of these cases, if not all, the establishments are still servicing/pumping out their grease removal devices, but they are not reporting these services/pump outs to the District. Largely, this is due to a high rate of employee turnover. Staff continues to educate establishments and grease haulers on the requirement for electronic submittals.

Standard Specifications Update

The District Standards were last updated in 2009. The Assistant Superintendent and District Engineer are organizing a collaborative effort among SPMUD staff to make proposed updates to the District Standards. The proposed updates will be highlighted and distributed to stakeholders and made available through the District's website for public comment. Those comments will be reviewed, and the final updated standards are planned to be adopted in the spring of 2020.

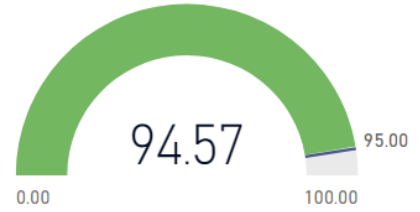
Department Performance Indicators

The following charts depict the efforts and performance of the department in the following areas of work as of January 28th. The charts are being created in a new reporting tool that directly connects to the District's data, improving the timeliness of reporting efforts and leveraging the District's investment in technology. Additional charts may be added in the future for other areas of work in the department.

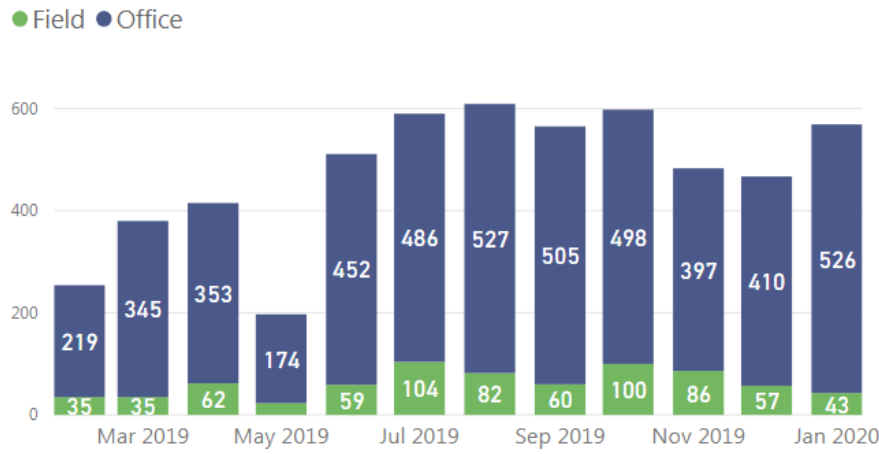
Plan Checks Completed - Monthly Totals



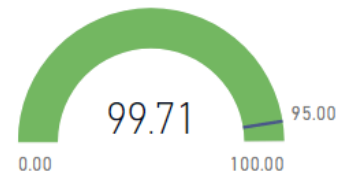
% "In Time" Plan Checks



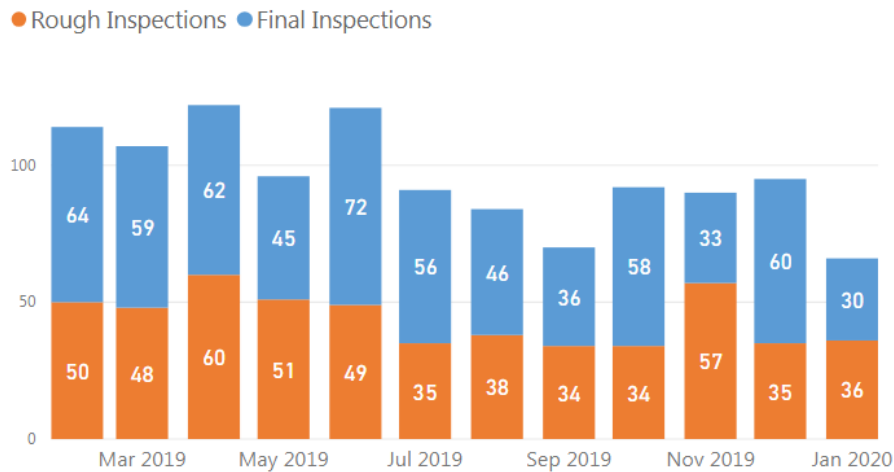
811 Responses - Monthly Totals



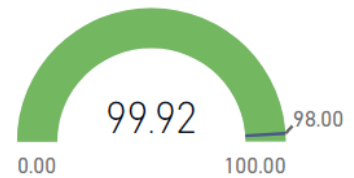
% "In Time" Responses...



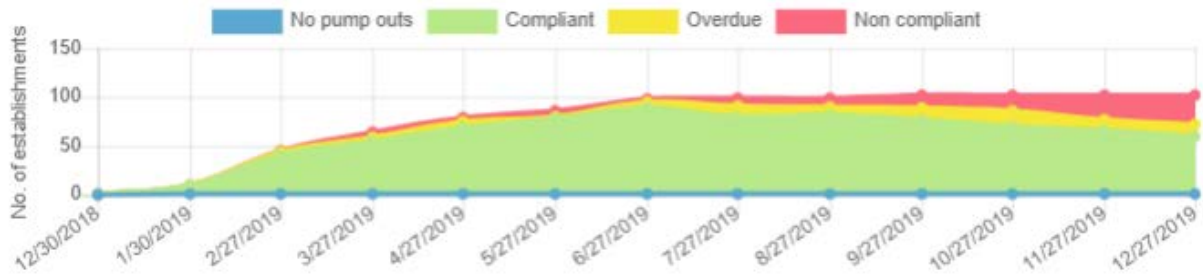
Building Sewer Inspections - Monthly Totals



% "In Time" Inspections

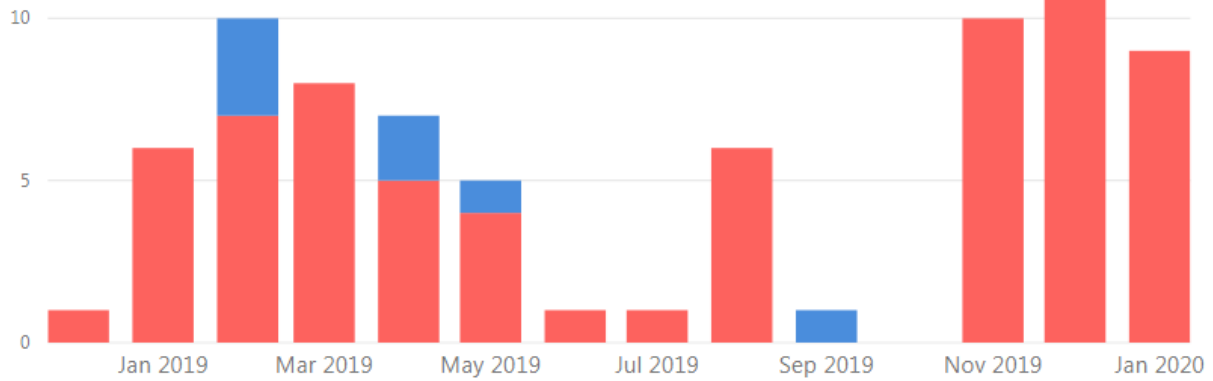


FOG Compliance History



Grease Interceptor Inspections

Template ● GGI Core Sample Inspection ● GGI Pump Out/Cleaning Inspection



FOG Pickups - Monthly Totals

