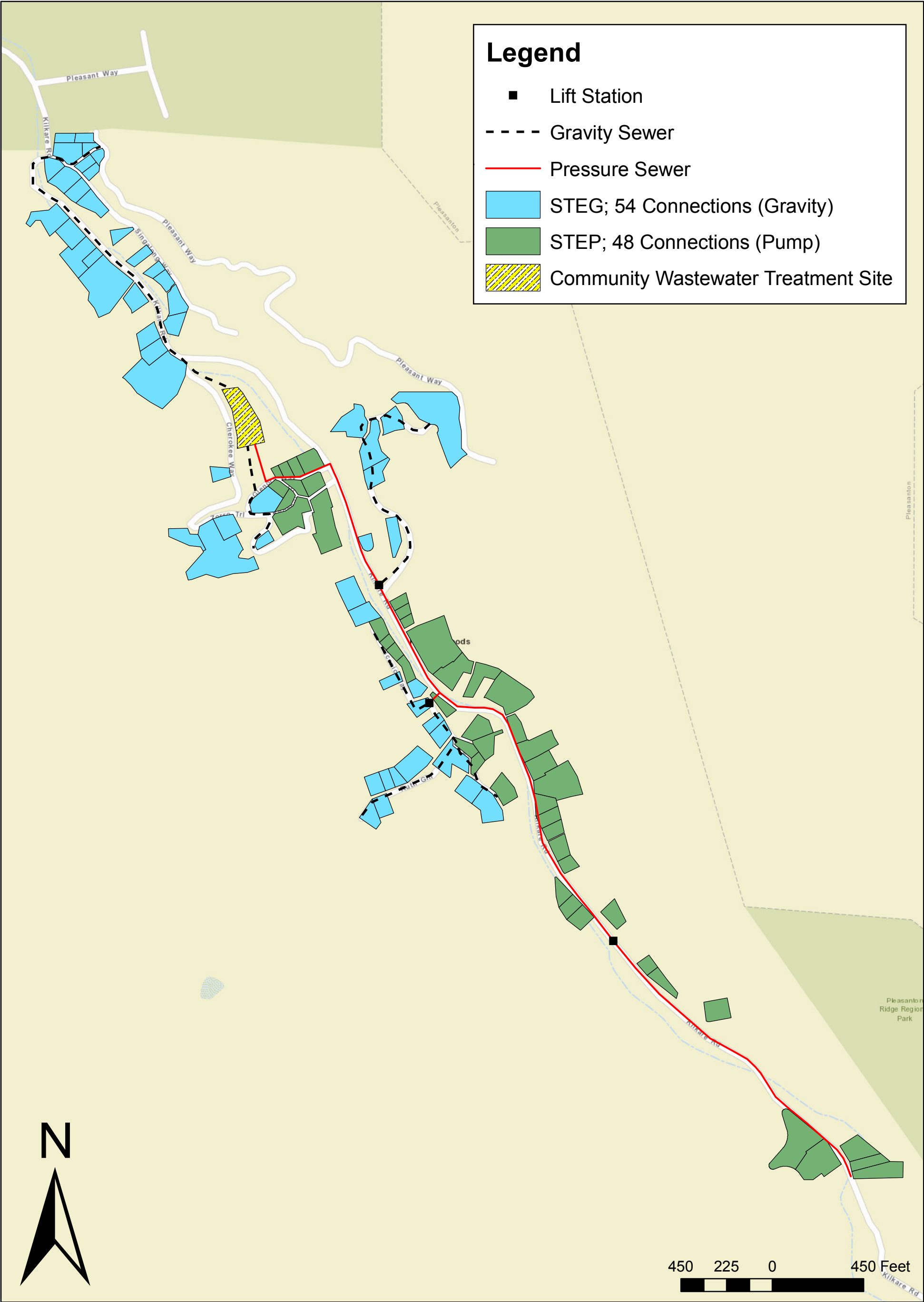




**KILKARE WOODS
STEP EFFLUENT SEWER PLAN**

ALAMEDA COUNTY LAMP
SUNOL, CA



**FIGURE
1**

Preliminary Cost Estimate*
Sunol Gravity Sewers & Intertie to City of Pleasanton/Dublin San Ramon SD
All Parcels (245)

Public Sewer Facilities					
Item No.	Description	Est Qty	Unit	Unit Cost (\$)	Total Cost (\$)
1	8-inch Gravity Sewers, Kilkare Rd	25,040	LF	\$275	\$ 6,886,000
2	4-inch Pressure Sewer, Downtown	2,820	LF	\$75	\$ 211,500
3	4-inch Dia Force Main to Pleasanton	15,400	LF	\$75	\$ 1,155,000
4	48" Dia Manholes (avg. 5' deep)	56	EA	\$12,500	\$ 701,000
5	Main Lift Station	1	LS	\$250,000	\$ 250,000
6	Terminal Flush Ports, Lamp holes	10	EA	\$2,500	\$ 25,000
7	Air Release Valve (w/ Manhole)	5	EA	\$8,500	\$ 42,500
8	Utility Locating (est. 5 per 1,000 ft)	215	EA	\$1,000	\$ 215,000
9	Traffic Control	120	Days	\$2,500	\$ 300,000
				Sub-total	\$ 9,786,000
10	Engineering, Environmental, Permits &		30%		\$ 2,935,800
				Sub-total	\$ 12,721,800
11	Miscellaneous & Contingency @ 20%				\$ 2,544,360
PUBLIC FACILITIES - TOTAL ESTIMATED COST					\$ 15,266,160

Individual On-lot Facilities					
Item No.	Description	Est Qty	Unit	Unit Cost (\$)	Total Cost (\$)
1	Septic Tank Abandonments	245	EA	\$3,000	\$ 735,000
2	Gravity Lateral Connections (200 at 50 ft)	10,000	LF	\$75	\$ 750,000
3	Grinder/Ejector Pump Units	45	EA	\$10,000	\$ 450,000
4	Pressure Lateral Connections (45 @ 75 ft)	3,375	LF	\$40	\$ 135,000
5	Engineering and Permitting	245	EA	\$1,500	\$ 367,500
				Sub-total	\$ 2,437,500
6	Contingency @ 10%				\$ 243,750
ON-LOT FACILITIES - TOTAL ESTIMATED COST					\$ 2,681,250

TOTAL ESTIMATED CONSTRUCTION COST	\$ 17,947,410
COST PER CONNECTION	\$ 74,163
SEWER CONNECTION FEE PER CONNECTION**	\$ 14,885
TOTAL ESTIMATED COST PER CONNECTION	\$ 89,048

* Does not include costs of annexation for sewer service

** 2019 Fees (per residence), City of Pleasanton and Dublin San Ramon Services District

KWA Community Park Wastewater Alternative (#3/#4)

Estimated Wastewater Flows, Treatment and Dispersal For Range of Connection Scenarios – 50, 75 and 100% of Parcels

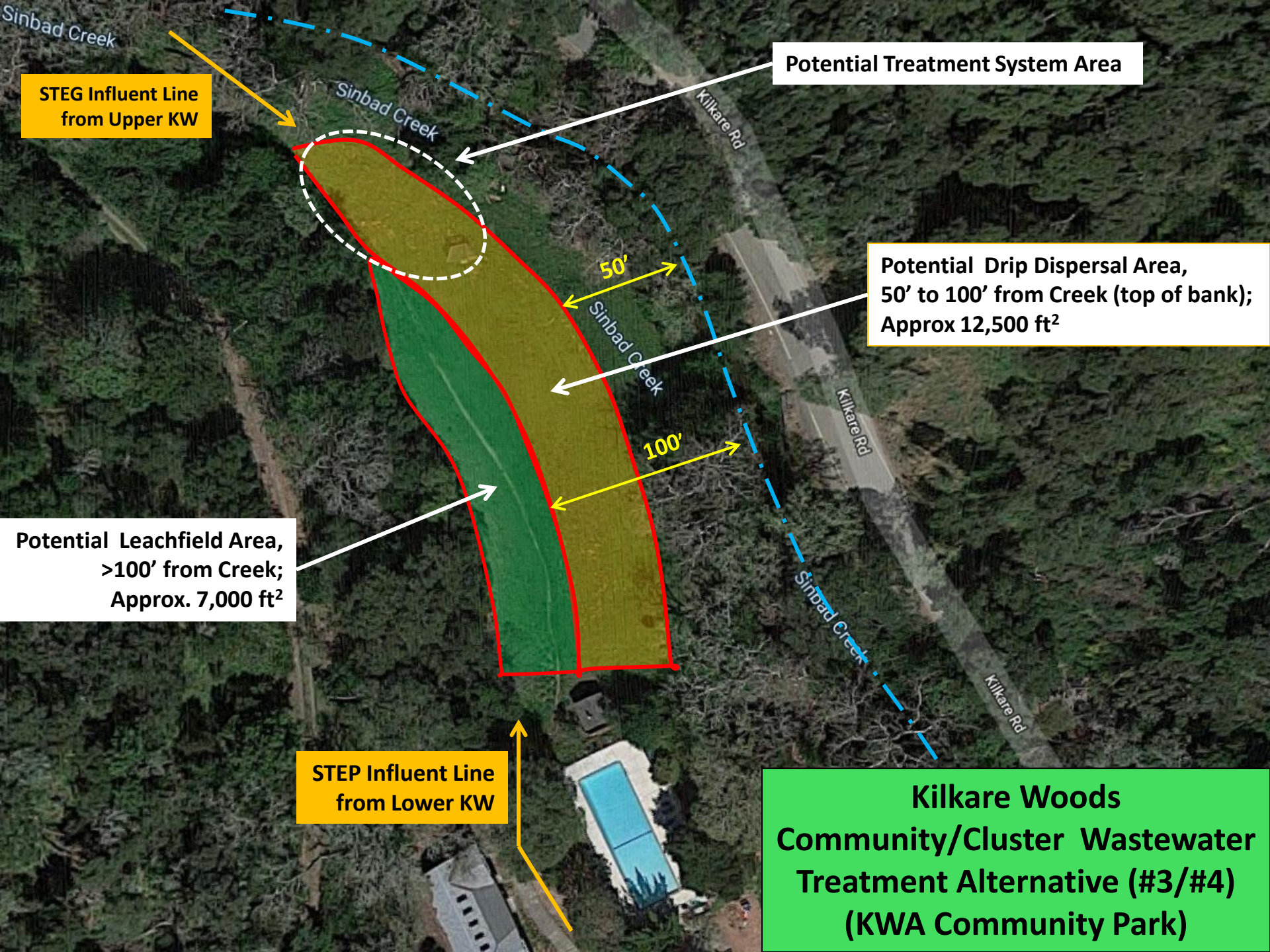
Connection Scenario	# of Parcels	Estimated Design Wastewater Flow (gpd)	Required Treatment System Area >50 ft from Creek (ft ²)	Available Dispersal Area (ft ²)		Potential Dispersal Capacity (gpd)			
				50 to 100 ft Setback ¹	>100 ft Setback	50 to 100 ft Setback ²	>100 ft Setback ³	Total Capacity	% of Required
100%	102	12,800	4,500	8,000	7,000	9,600	6,000	15,600	120%
75%	75	9,600	3,500	9,000	7,000	10,800	6,000	16,800	175%
50%	50	6,400	2,500	10,000	7,000	12,000	6,000	18,000	280%

Notes:

¹ 12,500 ft² total area minus space occupied by treatment system

² Capacity based on drip dispersal of treated, disinfected wastewater, at loading rate of 1.2 gpd per square foot of dispersal area

³ Capacity based on 1,000 lineal feet of pressure distribution leachfield, at enhanced loading rate of 6 gpd per lineal foot (5 ft/lf @ 1.2 gpd/ft²)



**STEG Influent Line
from Upper KW**

Potential Treatment System Area

**Potential Drip Dispersal Area,
50' to 100' from Creek (top of bank);
Approx 12,500 ft²**

**Potential Leachfield Area,
>100' from Creek;
Approx. 7,000 ft²**

**STEP Influent Line
from Lower KW**

**Kilcare Woods
Community/Cluster Wastewater
Treatment Alternative (#3/#4)
(KWA Community Park)**

Sunol Wastewater Feasibility Study

Gravity Sewers with Force Main Intertie to City of Pleasanton July 9, 2019

- This alternative would consist of a conventional gravity sewer system extending throughout Sunol, with an intertie to the City of Pleasanton sewer system, connecting to the Dublin San Ramon Services District for sewage treatment and disposal/reuse. It would provide sewer service to all properties in the Sunol StudyArea – Downtown, Lower Kilcare Road and Kilcare Woods.
- Conceptual plan is for a flow of up to approximately 37,500 gpd, as follows:
 - ✓ Downtown Sunol: 16,000 gpd
 - ✓ Lower Kilcare Road: 9,000 gpd
 - ✓ Kilcare Woods: 12,500 gpd
 - Total: 37,500 gpd
- Sewer Collection Facilities would consist of the following:
 - ✓ **Gravity lines.** Approximately 25,000 lineal feet (4.8 mi) of conventional 8” diameter gravity sewers and 50 to 60 manholes throughout the downtown area and extending up Kilcare Road to the end of Kilcare Woods.
 - ✓ **Pressure lines:** Approximately 2,800 lineal feet of small diameter pressure sewers serving about 45 properties needing to pump into the gravity lines (e.g., along sections of Foothill Rd).
 - ✓ Approximately 200 properties would have a gravity connection to the sewer.
 - ✓ Estimated 45 properties would require an ejector/grinder pump
 - ✓ All properties would abandon and decommission their existing septic tanks.
- **Main Lift Station.** The sewer collection system would drain to a main lift station located in the vicinity of Main Street and Niles Canyon Road. It would consist of:
 - ✓ Below-ground concrete vault (“wet well”)
 - ✓ (2) 30-hp submersible sewage pumps
 - ✓ Above ground control panel and standby emergency generator
- **Force Main Transmission Line.** Approximately 15,400 lineal feet (2.9 mi) of 4” sewer force main from the lift station to City of Pleasanton sewer system, via Main Street, Bond Street, and Foothill Road, terminating at the intersection of Foothill and Oak Tree Farm Dr.
- **Sewage Treatment and Disposal/Reuse** provided by Dublin San Ramon Services District.

Concept Plan - Sunol Sewer System with Intertie to City of Pleasanton

