

Executive Summary of the Special District Needs Assessment Project

June 11, 2024

INTRODUCTION

Mono County conducted a Special District Needs Assessment, funded by a California Development Block Grant (CDBG), with the following objectives:

1. Understand capacity of utilities provided by special districts (water, sewer, fire) within community areas to support housing development,
2. Evaluate utility service barriers to the development of certain Housing Opportunities Sites (as identified in the Housing Element),
3. Evaluate whether utility services provided by special districts could support an increase in zoning for housing density, and
4. Identify capital improvement projects that would increase special district capacity to support increased housing densities.

The reports and analyses developed to respond to the objectives above are summarized herein include the following:

- Special District Needs Assessment Reports for Bridgeport, Lee Vining, June Lake, and Crowley Lake.
- Capital Improvement Plan for Special Districts (water and sewer only) in Bridgeport, Lee Vining, June Lake, and Crowley Lake.
- Upzoning Analysis

CAPACITY SCENARIOS

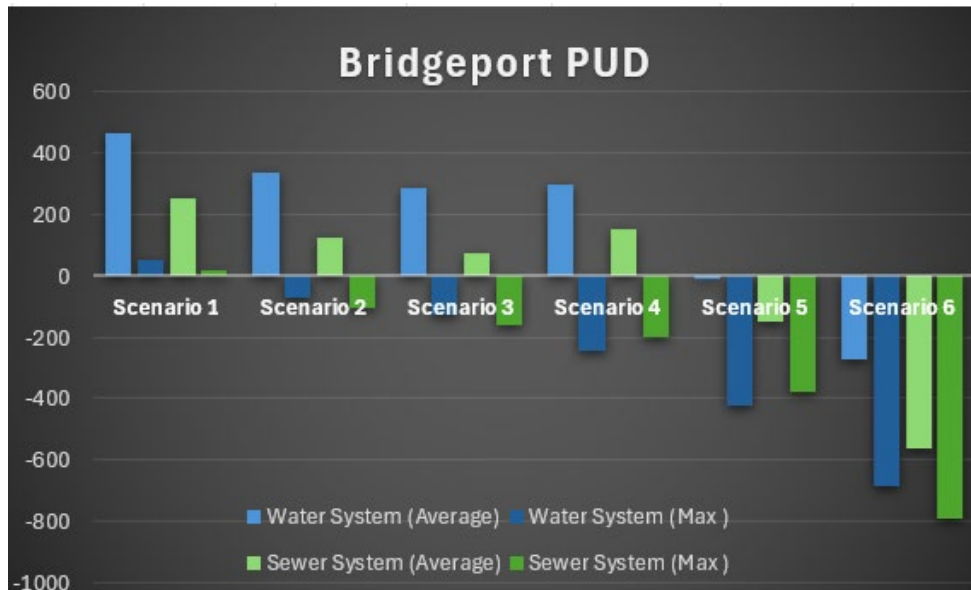
The RCI analysis defined the following build-out scenarios and analyzed an “average” day and “maximum” day capacity for each:

1. Current Demand
2. Current Demand + Vacant Parcels
3. Current Demand + Vacant Parcels + Housing Opportunity Sites (Key Sites)
4. Current Demand + ADUs + JADUs
5. Current Demand + Vacant Parcels + Housing Opportunity Sites (Key Sites) + ADUs + JADUs
6. Full Build-Out of Current Demand + maximum density development of all vacant parcels and ADUs/JADUs.
 - Note: A “true” full build-out analysis would assume year-round occupancy of all units and would therefore increase all use estimates by the vacancy rate.

NEEDS ASSESSMENTS, CAPACITY ANALYSIS & CAPACITY IMPROVEMENT PROJECTS

BRIDGEPORT

- **Population:** 553 people and 170 households
- **Utility:** Bridgeport Public Utility District (PUD) provides water (including water for fire protection) and sewer service.
 - 258 water connections, 96 sewer connections, and 60+ fire hydrants.
- **Water System Capacity Analysis:** The Bridgeport PUD has available water capacity for scenarios #1-4 of average day demand scenarios but cannot meet the highest density development scenarios (scenarios #5 & 6) for average day demand. The current water system only has capacity to meet the maximum demand of scenario #1 (current demand) and cannot meet the demand for scenarios #2-6.
- **Sewer System Capacity Analysis:** The Bridgeport PUD has available sewer capacity for all scenarios #1-4 of the average day demand scenarios and maximum day demand scenarios #1 (current demand) only. The capacity of the sewer system falls short in nearly all increased density maximum day scenarios (scenarios #3, 4, 5 & 6).



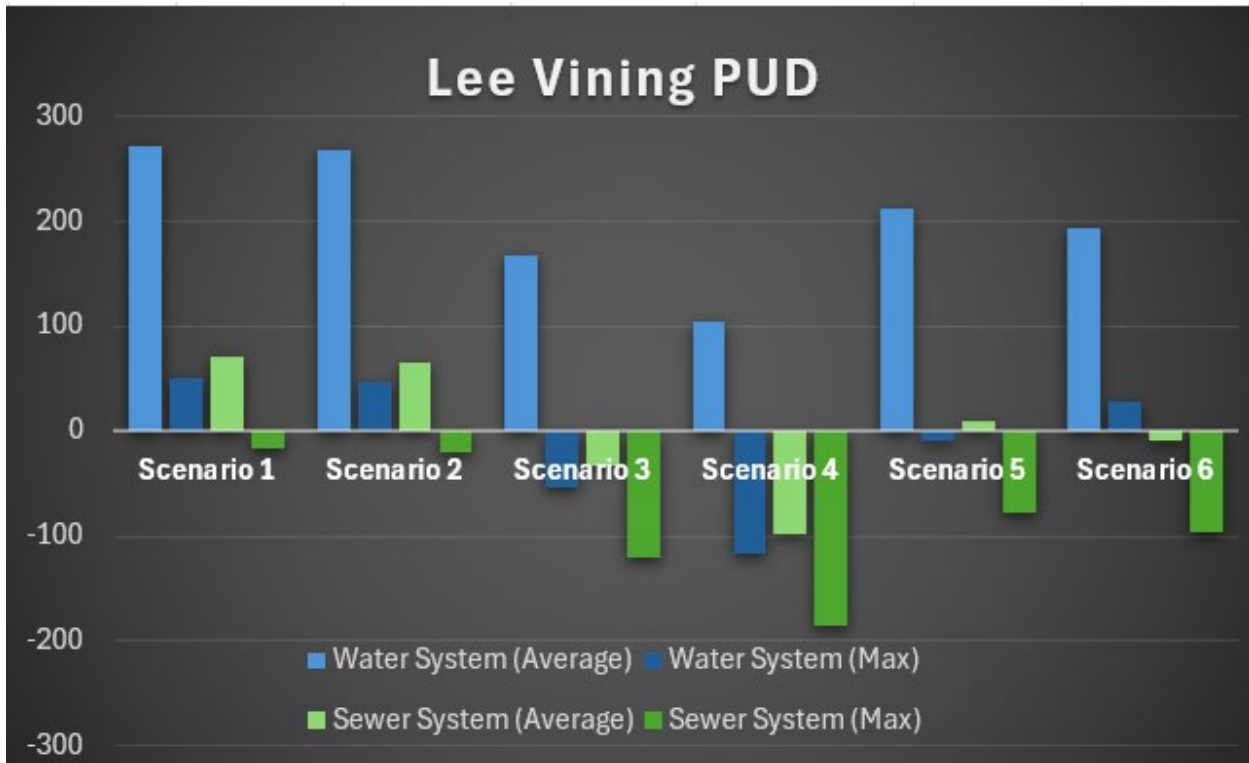
- **Overall Conclusions on Capacity Barriers to Development:**
 - Development in Bridgeport is limited by both water and sewer system capacity though the water system has slightly more capacity than the sewer system.
 - Some residential properties are currently undevelopable due to lack of sewer infrastructure and lot size. The Evans Tract could be a good candidate for additional residential density, but currently lacks sewer service.
 - Bridgeport PUD provides hydrants throughout the water service area. Most fire flows are adequate to meet existing needs, though two fire flow tests resulted in flows less than 1,500 gallons.
 - During the high demand summer months, the water system production is limited by the capacity of the water treatment plant, which currently operates near capacity during these times. The source water wells in the system have the ability to produce more water than they currently do, if not limited by the water treatment maximum flows.
- **Capacity Improvement Recommendations**
 1. Water system treatment capacity should be increased.
 2. Consideration of developer-constructed water distribution systems and extensions.
 3. Additional sewer infrastructure (collection systems) should be considered to extend collection to undeveloped lots and opportunities for increased density.
- **Capacity Improvement Priority Projects**

Nine priority projects are identified in the Phase 3 CIP to increase BPUD capacity. Bridgeport projects range in cost from just over \$400,000 to almost \$60 million, with costs per additional housing unit between \$7,200 and \$72,000.

LEE VINING

- **Population:** 217 people within 60 households
- **Utility:** The Lee Vining PUD provides water (including water for fire protection) and sewer service.
 - There are 100 water and sewer connections and 21 fire hydrants.
- **Water System Capacity Analysis:** The current water system has adequate production capacity for all scenarios during average day demand. When considering the maximum day demand, however, water production has the capacity to serve current development (scenario #1) plus vacant lot development (scenario #2) and is unable to meet the demands of scenarios #3-6.

- Sewer System Capacity Analysis:** The sewer system capacity in Lee Vining is adequate for the current discharge (scenario #1) plus vacant properties (scenario #2). None of the scenarios for the maximum day discharge can be met with existing wastewater treatment capacity.



- Overall Conclusions on Capacity Barriers to Development in Lee Vining:**
 - The Lee Vining PUD water system is served by a spring in Lee Vining Canyon and because the system relies on a single water source, the system is vulnerable to a water shortage should there be an interruption of production or access to the spring. Additionally, spring sources can be more vulnerable to contamination, reduced production due to drought, and negative effects from wildfire. The PUD has long-term plans of drilling and adding a well to the system but has not been able to acquire adequate funding for the project.
 - The current daily water production plus storage volume is more than sufficient to meet the average day demand and fire flow. The capacity is also able to meet the maximum day demand, but not sufficient to provide water for the maximum day demand plus fire flow (with two hours of fire flow, which is the duration required by fire codes for the typical construction type and size within the community). With maximum-day demand, the current supply and storage volume can support less than two hours of fire flow at 1500 gpm.
 - There are currently 21 fire hydrants in Lee Vining, spread throughout the community. The flow volume and pressure available throughout the community is currently unknown. As discussed in the Storage section, the water storage available for firefighting during maximum day demand is less than 2 hours at 1,500 gpm, (a typical flow volume required for single-family residential development). The need to identify system flow and pressure zones presents an opportunity for analysis and targeted capital improvement project to assure adequate fire-flow and pressure.
- Capacity Improvement Recommendations**
 - Develop a second and redundant source of domestic water supply, such as a new well to be used together with the existing spring.
 - As a part of item 1 above, construct additional storage (tanks) associated with a new water source to provide fire protection water storage.
 - Construct distribution system connections from new water source to existing systems.

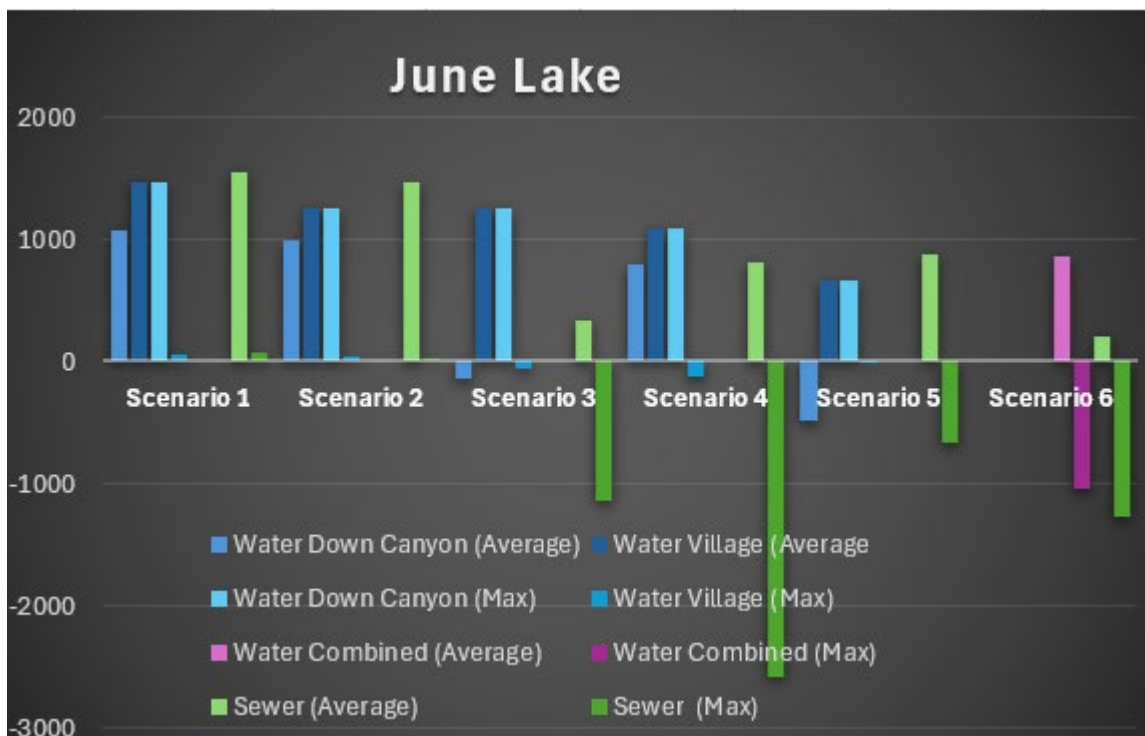
4. Expanded disposal ponds for increase sewer capacity.
5. Key Sites Consideration. Expand the sphere of influence to include the Tioga Inn Specific Plan.
 - Interconnect the water system and possibly combine with Tioga Mart system, construction an inter-tie with the water main that serves Lee Vining.
 - Construct approximately 4000+ L.F. of sewer line to provide connection to Lee Vining PUD and expand disposal ponds.

- **Capacity Improvement Priority Projects**

Two priority projects are identified in the CIP to increase Lee Vining PUD capacity. Lee Vining projects are those for full build-out and are over \$12 million for water and over \$7 million for sewer. This equates to \$153,000 and over \$90,200, respectively.

JUNE LAKE

- **Population:** 611 people within 114 households
- **Utility:** The June Lake Public Utility District (JLPUD) provides water and sewer services in June Lake.
 - There are 660 water and sewer connections and two separate water systems within JLPUD (the Village system and the Down Canyon system). The water distribution piping in the Village system is old, with much of the piping installed in the late 1930s.
- **Water System Capacity Analysis:** The Village PUD water system has adequate production capacity only for current and vacant lot scenarios (#1 & 2) for both average day and maximum day demands. The Down Canyon PUD water system has adequate production capacity for all scenarios during average day demand. When considering the maximum day demand, however, water production has the capacity to serve current development plus vacant development only. Any additional demands for lots or development considered at Key Sites or ADU and JADU cannot be met.
- **Sewer System Capacity Analysis:** The June PUD has available sewer capacity for all six average day demand scenarios and maximum day demand scenarios #1 (current demand) and #2 (development of vacant parcels & current demand). The capacity of the sewer system falls short in nearly all increased density maximum day scenarios (scenarios 3, 4, 5 & 6).

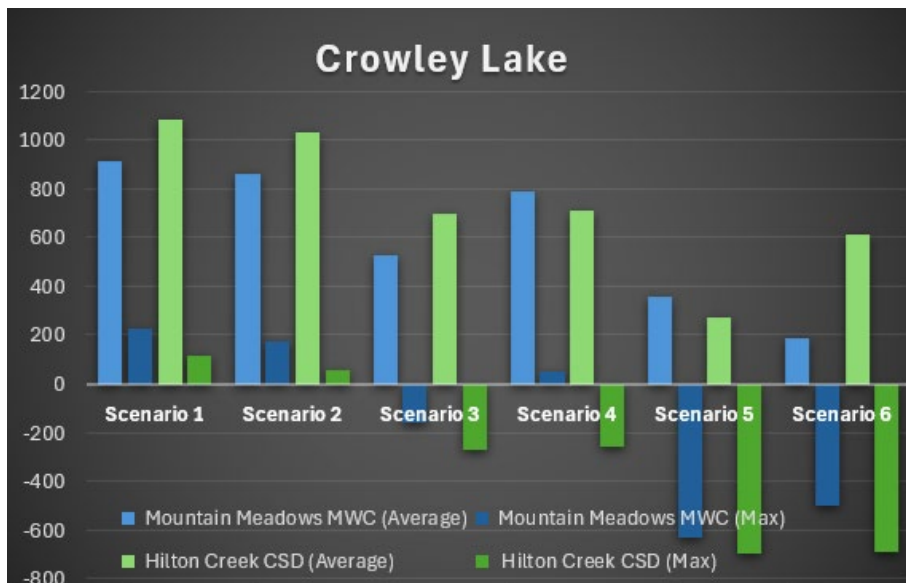


- **Overall Conclusions on Capacity Barriers to Development in June Lake:**
 - Development in June Lake is limited by both water and sewer system capacity.
 - June Lake PUD provides hydrants in the Village and Down Canyon systems. Fire flows are adequate to serve existing development. The storage capacity for the system provides adequate fire protection water for the designated 2 hours at 1,500 gpm fire flow on top of maximum day.
- **Capacity Improvement Recommendations**
 1. Develop additional water sources and storage at both PUD systems (Village and Down Canyon).
 2. Evaluation of existing water distribution system lines and possible leaks due to age of systems. Possible replacement of water lines.
 3. Construct distribution system connections from new water source to exiting systems.
 4. Expand and improve treatment capacity to accommodate key sites and ADU potential.
- **Capacity Improvement Priority Projects**

Two priority projects are identified in the CIP to increase June Lake PUD capacity. June Lake projects are those for full build-out and are over \$30 million for water and almost \$89 million for sewer. This equates to almost \$23,000 and over \$66,100 respectively.

CROWLEY LAKE

- **Population:** 980 people within 399 households
- **Utilities:** The Crowley Lake community receives water and sewer service via a special district and several mutual water companies.
 - Hilton Creek Community Services District (CSD), a special district, provides sewer service.
 - 373 sewer connections, serving approximately 1,000 to 1,200 residents.
 - Water service (including water for fire protection for certain neighborhoods) within Crowley Lake is provided by (1) Mountain Meadows Mutual Water Company (Mountain Meadows MWC), (2) Crowley Lake Mutual Water Company (Crowley Lake MWC), and (3) the Crowley Lake Trailer Park.
- **Water System Capacity Analysis:** The Mountain Meadows MWC has available water capacity for all six average day demand scenarios and maximum day demand scenarios #1 (current demand), #2 (development of vacant parcels & current demand) and four (development of ADUs/JADUs & current demand). The capacity of the system falls short in the highest density scenarios, scenarios #3, 5 & 6).
- **Sewer System Capacity Analysis:** The Hilton Creek CSD has available sewer capacity for all six average day demand scenarios and maximum day demand scenarios #1 (current demand) and #2 (development of vacant parcels & current demand). The capacity of the sewer system falls short in nearly all increased density maximum day scenarios (scenarios #3, 4, 5 & 6).



- **Overall Conclusions on Capacity Barriers to Development in Crowley Lake:**
 - Development in Crowley is more limited by sewer system capacity than by water system capacity.
 - The three Housing Element identified Key Sites within Crowley Lake are all adjacent to existing water and sewer infrastructure that may be extended to serve the properties. However, two of the three are outside the existing service territories of the mutual water companies.
 - Fire flow and pressure availability of hydrants within Crowley Lake is not well understood, future study is needed to understand the existing limitations of this system and its potential impacts on future development.
- **Capacity Improvement Recommendations**
 1. A capital project to determine fire flow and pressure availability within the water systems.
- **Capacity Improvement Priority Projects**

Four priority projects are identified in the Phase 3 CIP to increase BPUD capacity. Crowley Lake projects range in cost from \$530,000 to \$15.4 million, with costs per additional housing unit between \$5,300 and almost \$22,000.

CONCLUSION

The communities in this study appear to have sufficient water and sewer capacity, or close to sufficient capacity, for build out under existing zoning and average day demand, which incorporates a vacancy rate of 23% to 65% depending on community. The maximum day demand better reflects reduced vacancy rates, although likely still not 100% occupancy. Unfortunately, at maximum day demand levels, water and sewer services indicate significant deficiencies in all communities.

The challenge is that the high volume of fluctuation between average and maximum (and then full occupancy) demand cannot be controlled by land use density nor the service providers. Meeting existing needs under current zoning density, and then increasing zoning density to accommodate more housing, comes down to risk tolerance. If the “design” occupancy of water and sewer services should be more similar to the maximum day demand in this study, then none of the communities have the capacity to meet current demand under existing zoning, let alone increase zoning. If the “design” occupancy should be even higher, to reflect closer to 100% occupancy, then the deficiencies are exacerbated. If the “design” occupancy should be lower, however, then potentially some communities have capacity to increase zoning density at an increased risk of being unable to meet demand if the “design” occupancy is exceeded.

Determining the “design” occupancy level and risk tolerance is outside the scope of this study and analysis. However, the suspicion that water and sewer service is a limiting factor to increasing housing development appears to have merit, and so one clear recommendation from this work is to focus on capacity improvements for these services. To that end, capacity improvement projects from this study will be included in the Mono County Comprehensive Economic Development Strategy to facilitate qualification for potential funding sources.