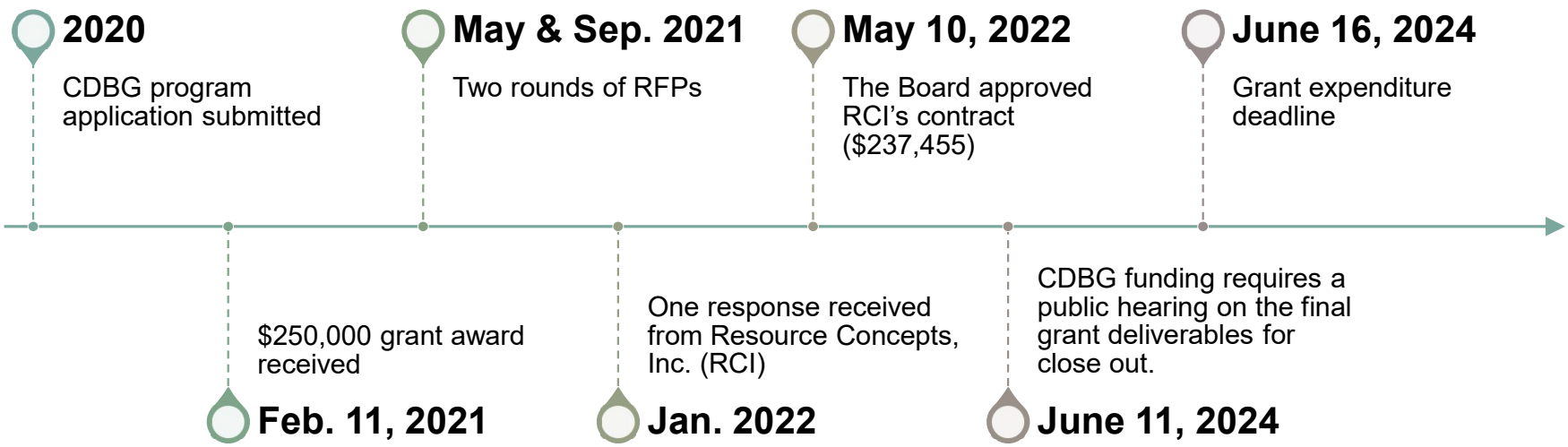
Special District Needs Assessment & Capacity Improvement Plan

Funded by a California Development Block Grant (CDBG)

Grant Timeline (2020 – 2024)



Project 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.

Project Phases

Phase 1

Baseline Survey and Outreach

- **Contract Completion Date:** 12.31.2022 [Actual: 04.07.2023]
- **Deliverable:** Summary documents containing the information needed to update Municipal Service Review and Sphere of Influence Reports for 16 Special Districts.

Phase 2

Potential Housing Development & Service Capacity Analysis for Key Housing Element Sites

- **Contract Completion Date:** 06.01.2023 [Actual: 03.30.2024]
- **Deliverable:** Special Districts Needs Assessment Summary Reports for Bridgeport, Lee Vining, June Lake, Crowley Lake.

Phase 3

Capacity Improvement Plan (CIP) for Special Districts

- **Contract Completion Date:** 12.31.2023 [Actual: 03.30.2024]
- **Deliverable:** CIP identifying specific projects, costs, and the estimated increase in housing units that could be supported.

Reports & Analyses

1. Special District Summaries [RCI]
2. Special District Needs Assessment Reports [RCI]
   - Bridgeport, Lee Vining, June Lake, Crowley Lake
3. CIP for Special Districts (water and sewer only) [RCI]
   - Bridgeport, Lee Vining, June Lake, Crowley Lake
4. Upzoning Analysis [County Staff]

Capacity Scenarios

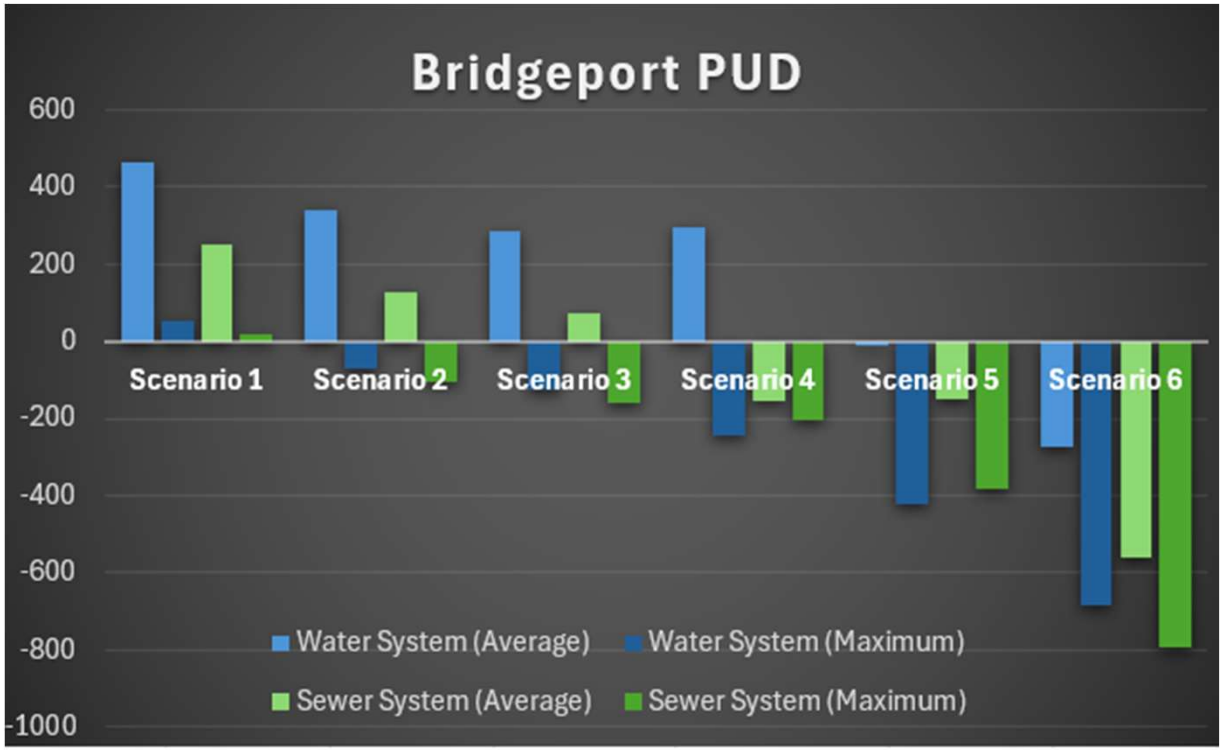
The RCI analysis defined the following build-out scenarios and analyzed an “average” day and “maximum” day capacity for each:

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.

Bridgeport

- **Population:** 553 people & 170 households
- **Utility:** Bridgeport Public Utility District (PUD)
- **Services:** Water (including water for fire protection) and sewer service.
  - 258 water connections
  - 96 sewer connections
  - 60+ fire hydrants



Bridgeport

Water System Capacity Analysis

- *Average Demand:* Available water capacity for scenarios #1-4, cannot meet the highest density scenarios (scenarios #5 & 6).
- *Maximum Demand:* Capacity for scenario #1 (current demand) and cannot meet the demand for scenarios #2-6.

Sewer System Capacity Analysis

- *Average Demand:* Available sewer capacity for scenarios #1-3, cannot meet scenarios 4-6.
- *Maximum Demand:* Capacity for scenario #1 (current demand) only, cannot meet the demand for scenarios #2-6).

Bridgeport: Overall Conclusions

- Development is limited by both water and sewer system capacity.
- Some residential properties are currently undevelopable due to lack of sewer infrastructure and lot size.
- Hydrants: Most fire flows are adequate to meet existing needs. Two fire flow tests resulted in flows less than 1,500 gallons.
- The water system production is limited by the capacity of the water treatment plant (especially during the summer).

Bridgeport: Capacity Improvements

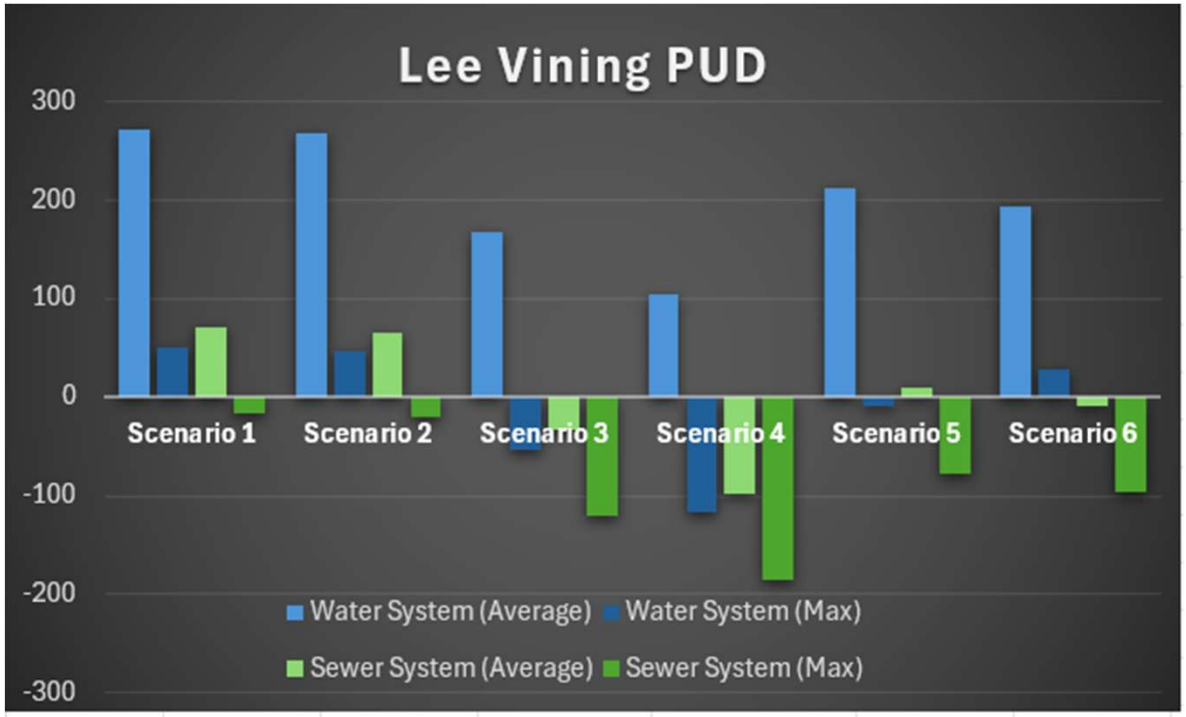
- Increase water system treatment capacity.
- Consideration of developer-constructed water distribution systems and extensions.
- Additional sewer infrastructure (collection systems) should be considered to extend collection to undeveloped lots and opportunities for increased density

Bridgeport: Priorities

1. Nine priority projects are identified in the Phase 3 CIP.
2. Projects range in cost from $400,000-$60 million.
3. Housing costs range from $7,200-$72,000 per unit.

Lee Vining

- **Population:** 217 people, 60 households
- **Utility:** Lee Vining Public Utility District (PUD)
- **Services:** Water (including water for fire protection) and sewer service.
  - 100 water and sewer connections
  - 21 fire hydrants
  - The water system is served by a spring in Lee Vining Canyon.



*Note: The Tioga Inn property is included in the capacity analysis, but is expected to be on a separate water & sewer service.

Lee Vining

Water System Capacity Analysis

- *Average Demand:* The current water system has adequate production capacity for all scenarios.
- *Maximum Demand:* Capacity for scenarios #1 and 2 but cannot meet the demand for scenarios #3-6.

Sewer System Capacity Analysis

- *Average Demand:* Available capacity for scenarios #1 and 2 only, cannot meet scenarios 3-6.
- *Maximum Demand:* Capacity cannot meet any maximum demand scenarios.

Lee Vining: Overall Conclusions

- A single water source (in this case, a spring), is vulnerable to a water shortage and contamination.
- The current daily water production plus storage volume is sufficient to meet the average day demand and fire flow. However, the system cannot provide water for the maximum day demand plus fire flow.
- Hydrants: The flow volume and pressure available is unknown.

Lee Vining: Capacity Improvements

1. Develop a second water source.
2. Construct additional storage (tanks) associated with a new water source (for fire protection water storage).
3. Construct distribution system connections from new water source to existing systems.
4. Expanded disposal ponds for increased 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 PUD and expand disposal ponds.

Lee Vining - Priorities

Two priority projects are identified in the CIP.

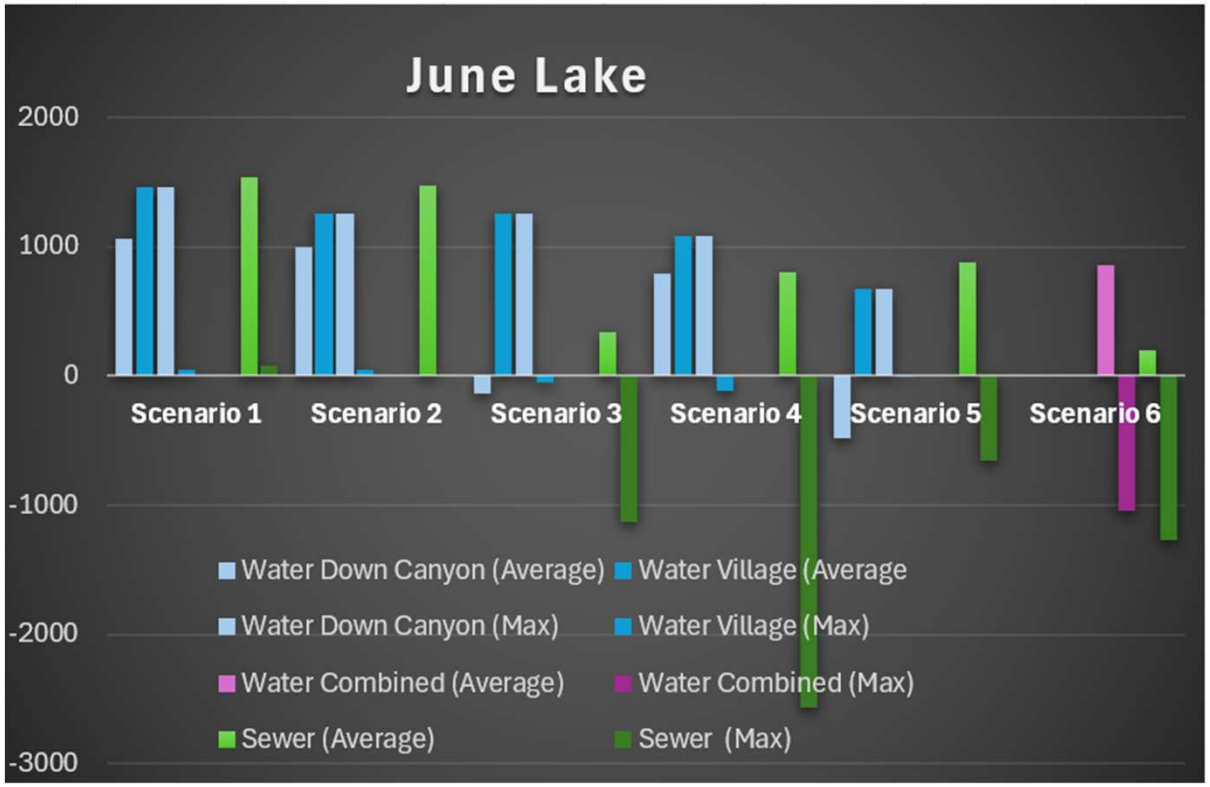
Projects are for full build-out:

- $12 million for water
- $7 million for sewer

Costs per additional housing unit = $153,000 and $90,200

June Lake

- **Population:** 611 people, 114 households
- **Utility:** June Lake Public Utility District (JLPUD)
- **Services:** Water (including water for fire protection) and sewer service.
  - 660 water and sewer connections
  - Two separate water systems (the Village system and the Down Canyon system).
  - Most of the Village water system was installed in the late 1930s.



June Lake

Water System Capacity Analysis

- *Average Demand:* Village PUD - adequate production capacity for scenarios #1, 2, & 4. Down Canyon PUD - adequate production capacity for all scenarios during average day demand.
- *Maximum Demand:* Village PUD - adequate production capacity for scenarios #1 & 2. Down Canyon - capacity for all scenarios.

Sewer System Capacity Analysis

- *Average Demand:* Available sewer capacity for scenarios #1-6.
- *Maximum Demand:* The capacity falls short in nearly all increased density scenarios (scenarios #3-6).

June Lake – Overall Conclusions

Development is limited by both water and sewer system capacity.

Hydrants: Fire flows are adequate to serve existing development. The storage capacity for the system provides adequate fire protection water.

June Lake – Capacity Improvements

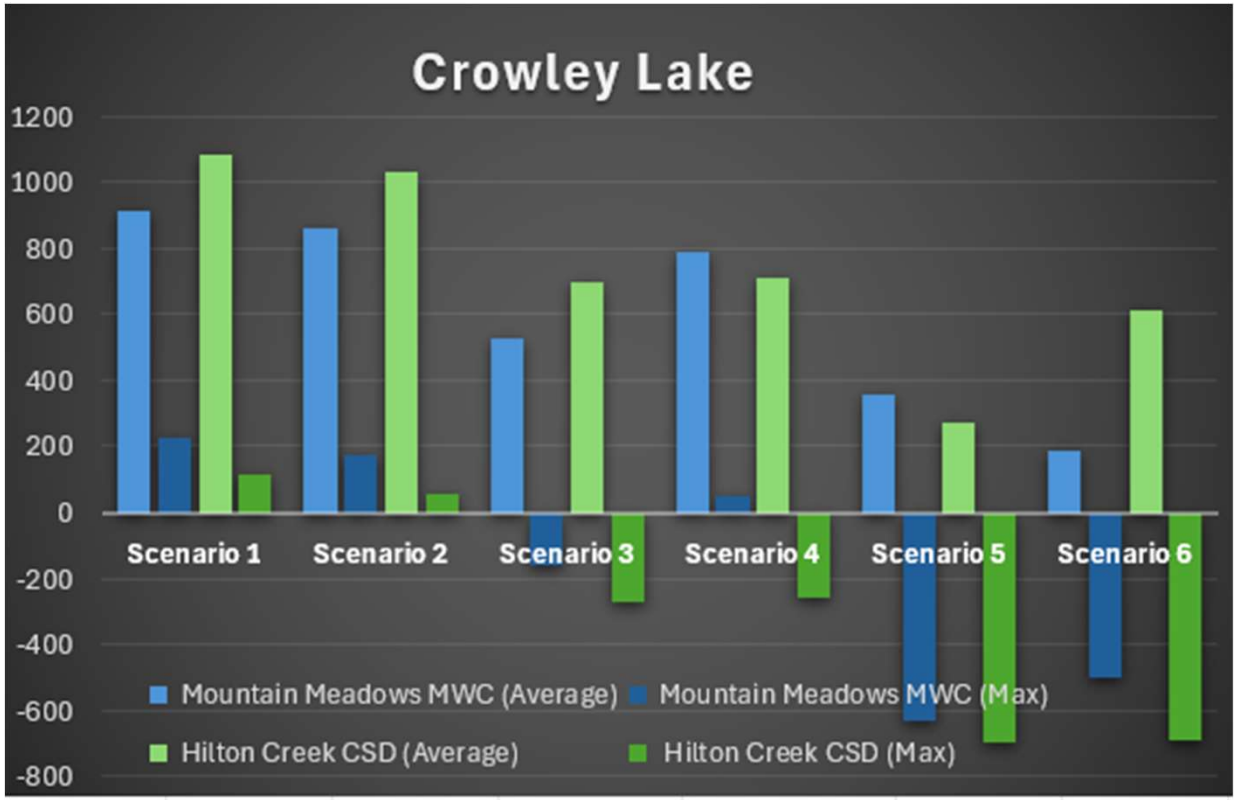
1. Develop additional water sources and storage at both PUD systems (Village and Down Canyon).
2. Evaluation of existing water distribution system lines and possible leaks due to age of systems. Possible replacement of water lines.
3. Construct distribution system connections from new water source to exiting systems.
4. Expand and improve treatment capacity to accommodate key sites and ADU potential

June Lake - Priorities

- Two priority projects are identified in the CIP to increase June Lake PUD capacity.
- June Lake projects are for full build-out:
  - $30 million for water
  - $89 million for sewer.
- Costs per additional housing unit = $23,000-$66,100.

Crowley Lake

- **Population:** 980 people, 399 households
- **Utilities:** A special district and several mutual water companies.
  - **Sewer Service:** Hilton Creek Community Services District (CSD) (a special district) provides 373 sewer connections, serving approximately 1,000-1,200 residents.
  - **Water Service:** Including hydrants for certain neighborhoods is provided by:
    1. Mountain Meadows Mutual Water Company (Mountain Meadows MWC)
    2. Crowley Lake Mutual Water Company (Crowley Lake MWC)
    3. Crowley Lake Trailer Park



Crowley Lake

Water System Capacity Analysis

- *Average Demand:* Available water capacity for scenarios #1-6.
- *Maximum Demand:* Capacity for scenarios #1 and #2, but cannot meet the demand for scenarios #3, 5 & 6.

Sewer System Capacity Analysis

- *Average Demand:* Available sewer capacity for scenarios #1-6.
- *Maximum Demand:* The capacity falls short in nearly all increased density maximum day scenarios (scenarios #3, 4, 5 & 6).

Crowley Lake – Overall Recommendations

- Development is more limited by sewer system capacity than by water system capacity.
- Two of the three Housing Element identified Key Sites are adjacent to infrastructure, but outside the existing service territories of the mutual water companies.
- Hydrants: Fire flow and pressure availability of hydrants within Crowley Lake is not well understood.

- 1. A capital project to determine fire flow and pressure availability within the water systems.

Crowley Lake - Priorities

Four priority projects are identified in the Phase 3 CIP to increase BPUD capacity.

Projects range in cost from $530,000-$15.4 million.

Costs per additional housing unit = $5,300-$22,000.

Increased Density Analysis

Assumptions:

- Future water use remains the same as current water use
- Data does not account for vacancy rates or seasonal occupancy.
- Detached ADU's are 65% of an SFR
- Attached Junior ADU's are 35% of an SFR

Implications:

- Increased occupancy results in more water usage and effluent without an increase in units.
- Difference between average and maximum day demand may be in increase in occupancy, not an increase in water usage or effluent discharge per capita/household.

Bridgeport – Increased Density

- 30% vacancy rate
- Water Deficiencies:
  - Average demand = #5-6
  - Maximum demand = #2-6
- Sewer Deficiencies:
  - Average demand = #4-6
  - Maximum demand = #2-6
- Conclusion: Insufficient water & sewer capacity to increase zoning density.

June Lake – Increased Density

- 60% vacancy rate
- Village Water Deficiencies:
  - Average demand = #3, 5-6
  - Maximum demand = #3-6
- Down Canyon Water:
  - No deficient scenarios
- Sewer Deficiencies:
  - Average demand = none
  - Maximum demand = #3-6

June Lake – Conclusions

- Insufficient sewer capacity to increase zoning density overall.
- Down Canyon may have sufficient water only to increase density, but these neighborhoods (Clark, Petersen, Williams tracts) may not be appropriate

Lee Vining – Increased Density

- 23% vacancy rate
- "Commercial" designation allows for higher density
- Water Deficiencies:
  - Average demand = none
  - Maximum demand = #3-6
- Sewer Deficiencies:
  - Average demand = #3-6
  - Maximum demand = #1-6
- Conclusion: Insufficient water & sewer capacity to increase zoning density.

Crowley Lake – Increased Density

- 25% vacancy rate
- Water Deficiencies:
  - Average demand = none
  - Maximum demand = #3, 5-6
- Sewer Deficiencies:
  - Average demand = none
  - Maximum demand = #3-6
- Conclusion: Insufficient water & sewer capacity to increase zoning density.

Conclusions

Overall Capacity Conclusions (All Communities)

- Most communities appear to have sufficient or close to sufficient water and sewer capacity for build out under existing zoning and average day demand (vacancy rate of 23% - 65%, depending on community).
- The maximum day demand better reflects reduced vacancy rates, although likely still not 100% occupancy. Water and sewer services are significantly deficient in all communities.

Study Challenges/Limitations

- The high volume of fluctuation between average and maximum (and 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 which could be managed through a “design day.”

Conclusions

Design Occupancy

- If the "design day" occupancy of water and sewer services:
  - Should be similar to the **maximum day demand,** then none of the communities have the capacity to meet current demand under existing zoning.
  - Should be **even higher, to reflect closer to 100% occupancy,** then the deficiencies are exacerbated.
  - Should be **lower**, then potentially some communities have capacity to increase zoning density at an increased risk.
- Determining the "design" occupancy level and risk tolerance is outside the scope of this study and analysis.

Conclusions

- **Recommendation: F**ocus on water and sewer capacity improvements to supply existing zoning.
- **Next Steps:** Capacity improvement projects from this study will be included in the Mono County Comprehensive Economic Development Strategy to facilitate qualification for potential funding sources.