PRELIMINARY ENGINEERING REPORT

FOR

SHASTA COUNTY
SERVICE AREA NO. 13 ALPINE MEADOWS

FIRE SUPPRESSION SYSTEM
IMPROVEMENT PROJECT

JUNE 2022

JOB NO. 199.107

Prepared By:

PACE® ENGINEERING

June 6, 2022

199.107

SENT BY MAIL AND EMAIL
vtrotter@co.shasta.ca.us

Venton Trotter, Supervising Engineer
Shasta County Department of Public Works
1855 Placer Street
Redding, CA 96001

Dear Mr. Trotter:

We are pleased to present the final Preliminary Engineering Report (PER) entitled:

SHASTA COUNTY SERVICE AREA NO. 13 ALPINE MEADOWS
FIRE SUPPRESSION SYSTEM IMPROVEMENT PROJECT
PRELIMINARY ENGINEERING REPORT

This final PER format follows the requirements of USDA Rural Development (RD) Bulletin 1780-2. It is a necessary attachment to submit a complete Financial Assistance Application (FAA) for construction funding should the County choose to pursue such funding.

PACE Engineering, Inc. would like to thank County staff for their able assistance in its preparation. Please call with any questions you have regarding this PER.

Sincerely,

Laurie McCollum, P.E.
Senior Engineer

Enclosure

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PRELIMINARY ENGINEERING REPORT

FOR

SHASTA COUNTY
SERVICE AREA NO. 13 ALPINE MEADOWS

FIRE SUPPRESSION SYSTEM IMPROVEMENT PROJECT

6/6/22

REGISTERED PROFESSIONAL ENGINEER
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STATE OF CALIFORNIA

DECEMBER 2021

JOB NO. 199.107

Prepared By:

PACE ENGINEERING

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ABBREVIATIONS

The following abbreviations are used in this report:

AIS	American Iron & Steel
Board	Shasta County Board of Supervisors
CAB	Community Advisory Board
CEQA	California Environmental Quality Act
County	Shasta County
CSA 13	Shasta County Service Area No. 13 Alpine Meadows
CVRWQCB	Central Valley Regional Water Quality Control Board
DAC	Disadvantaged Community
DDW	Division of Drinking Water
DOF	Department of Finance
ENRCCI	Engineering News-Record Construction Cost Index
Ft	Feet
GPM	Gallons Per Minute
HDD	Horizontal Directional Drilling
ISO	Insurance Services Office
LAFCO	Local Agency Formation Commission
LCC	Life Cycle Cost
MDD	Maximum Day Demand
MG	Million Gallons
MHI	Median Household Income
MSR	Municipal Services Review
NEPA	National Environmental Policy Act
NPW	Net Present Worth
O&M	Operations and Maintenance
PACE	PACE Engineering, Inc.
PG&E	Pacific Gas and Electric
PVC	Polyvinyl Chloride Pipe
SF	Square Foot
SWRCB	State Water Resources Control Board
USDA RD	United States Department of Agriculture Rural Development
USGS	United States Geological Survey

SHASTA COUNTY SERVICE AREA NO. 13 ALPINE MEADOWS FIRE SUPPRESSION SYSTEM IMPROVEMENT PROJECT PRELIMINARY ENGINEERING REPORT JUNE 2022

I. PROJECT PLANNING

A. LOCATION

Shasta County (County) Service Area No. 13 Alpine Meadows (CSA 13) is a small community water system serving the unincorporated community of Shingletown located approximately 30 miles east of Redding, California. The water system is managed by the County and provides water service and fire protection to the Whispering Woods Subdivision along Emigrant Trail and the Dollar General in Shingletown, California. A small fire suppression system exists on the south side of Highway 44 along Alpine Meadows Road; however, the condition of the system is unknown and is considered nonfunctional. Figure 1 shows the existing CSA 13 water system facilities, including tanks and two water source wells.

As shown in Figure 2, according to the 2017 County of Shasta Local Agency Formation Commission (LAFCO) Municipal Services Review (MSR) for CSA 13, the existing water service boundary encompasses an area of approximately 131 acres. While CSA 13 provides fire suppression for the service area south of Highway 44, that portion of CSA receives water service from the neighboring Woodridge Mutual Water Company.

B. ENVIRONMENTAL RESOURCES PRESENT

There does not appear to be any lasting impact on land resources, historic sites, wetlands, flood plains, endangered species, or critical habitat as a result of the proposed project. The project design and construction will need the appropriate permits to be obtained and typical specific mitigation measures taken into account. Contingent upon findings of the environmental document, the project design and construction are anticipated to incorporate typical mitigation measures included in Table 1 so as to not impact natural resources.

C. POPULATION TRENDS

CSA 13 currently has a total of 31 metered active service connections within the service area boundary. One connection is commercial while the remaining connections are single-family residential. There are also currently 12 standby connections. Alpine Meadows is not a Census Designated Place, so exact population statistics are not available. The 2017 MSR for CSA 13 indicated an approximate population of 43 and 27 connections at the time of the MSR.

According to the 2017 MSR, future growth in the unincorporated areas of Shasta County will likely be negligible; although, based on connections, the annual growth rate since 2017 has been about 3.5%. The Department of Finance (DOF) predicts an overall growth rate of just under 0.5% for all of Shasta County in the next 20 years, which would result in an approximate population of 48 in CSA 13. However, a May 2016 report by the DOF noted a decrease of 0.5% in Shasta County's unincorporated areas between 2015 and 2016. This is not surprising, as rural unincorporated areas typically have slower growth than more urban areas. There are currently no developments proposed for connection to the water system, and as such, growth in CSA 13 in the next 20 years is assumed to be negligible.

When determining the median household income (MHI) for an area, United States Department of Agriculture Rural Development (USDA RD) utilizes the 2010 American Community Survey 5-Year Estimates (U.S. Census Bureau). Using this criteria, the MHI for Shasta County is $43,944, and the MHI for Shingletown is $43,314, or approximately 71% of the state average of $60,883, classifying the community as a disadvantaged community (DAC).

D. COMMUNITY ENGAGEMENT

Although not currently active, a Community Advisory Board (CAB) typically serves as a liaison between CSA 13 residents and the County. According to the 2017 MSR, the CSA 13 CAB was established by the County in 1984. CAB members are appointed by the County Board of Supervisors (Board) and each serve two-year terms. Each year, property owners are invited to nominate CAB candidates for vacant seats, and elections are held if the number of candidates exceed the number of vacant seats. The CAB provides a vehicle for more local participation and accountability on an as-needed basis.

II. EXISTING FACILITIES

A. LOCATION MAP

Existing CSA 13 water facilities are shown on Figure 1.

B. HISTORY

History of the major CSA 13 system components is shown in Table 2.

C. CONDITION OF EXISTING FACILITIES

Wells

The potable water system north of Highway 44 contains two wells located in the northwest corner of the service area boundary. Both wells were constructed in 1991. Well No. 1 has been offline since 2002 due to positive total coliform issues that were unable to be resolved. Well No. 2 reportedly produces 30 to 40 gallons per minute (GPM) of high quality water that does not require any treatment or disinfection. On occasion, Well No. 2 will test positive for total coliform as it did in November 2018 and again in July 2020; however, after the County disinfects, flushes, and tests the well, the issue clears up for long periods of time. A November 3, 2021 site visit revealed several issues that should be addressed. Notable issues include lack of security/fencing of the well site, below grade sample stations, poorly protected well caps that are likely contributing to the coliform issues, and lack of emergency backup power.

Well No. 2 is currently the only source of water for the entire service area; therefore, the condition of this well should be a top priority.

Photo 1 – Well No. 1 (Offline)

Photo 2 – Well No. 2 (Active)

Potable Water Storage Tanks

Adequate water storage facilities in a water system are important for a number of reasons. It may be necessary to replace a pumped supply with stored water in the case of a power outage or broken pipeline. Also, it is usually more economical to rely on water from storage rather than expanding water supplies to meet peak hour demand flows over and above the 24-hour average flow during maximum day demand (MDD). The amount of storage needed to meet these peak demands is normally called equalizing storage. The amount of storage in a water system available for fire demands during MDD conditions also affects the rating by the Insurance Services Office (ISO) for fire protection facilities. There are currently two storage tanks totaling 192,000 gallons in the CSA 13 system.

Photo 3 – Water Storage Tanks

Tank No. 1 is a 96,000-gallon bolted steel tank that was constructed in 1991 as part of the original water distribution system. Tank No. 2 is a 96,000-gallon bolted steel tank designed by PACE Engineering, Inc. (PACE) and constructed in 2016. The need for Tank No. 2 was identified as part of the recent Dollar General development to provide adequate pressure and fire flows in the system, as well as provide much needed system storage. A few needs identified during the November 3, 2021 site visit are the lack of fencing/security at the tank site, faded paint coat on Tank No. 1, and moisture on the concrete slab of Tank No. 2, which could be indicative of a possible leak and warrants further investigation.

Distribution System

The distribution system north of Highway 44 consists of a network of about 6,200 feet of mainline polyvinyl chloride (PVC) piping ranging from 6-inch to 10-inch diameter. Most of the piping was installed in 1991, is primarily PVC, and is projected to last another 30+ years.

Information regarding the CSA 13 fire suppression system south of Highway 44 is largely unknown, with little to no mapping. It is assumed to be approximately 3,500 feet of mainline piping ranging from 6-inch to 10-inch and installed in the early 1980s; however, the exact

pipeline material, size, location, and condition are unknown. Parts of the system the County is familiar with are leaking and in very poor condition. As such, the system is considered nonfunctional and is in need of replacement.

D. FINANCIAL STATUS OF EXISTING FACILITIES

Rate Schedule: The current water rate schedule for CSA 13 was adopted by the Board in 2017. Refer to Appendix A. As shown therein, the current bi-monthly charge as of September 1, 2020, is $66.75 for the first 10,000 gallons of water used, then $2.15 per 1,000 gallons or portion thereof for any additional water used beyond 10,000 gallons. The average bi-monthly water bill in Fiscal Year 2020-2021 (FY 20/21) was equivalent to $116.57; this would equate to approximately 1.6% of the 2010 MHI. USDA RD typically requires water rates to be upwards of 2% of the community MHI, or $144.38 for CSA 13, before grant funding can be obtained.

Annual Budget: As shown in the FY 20/21 Audited Financials, the operating revenue was $50,778, while the operating expenses were $58,430, for an operating loss of $7,652. With a transfer of $10,000, the net revenue of CSA 13 was $2,440, leaving a balance operating reserve of $107,778. Refer to Appendix B. The Audited Financials cover all of CSA 13, which provides both water and sewer services. The CSA 13 budget for water only indicates the operating revenue in FY 20/21 was $21,682, while the operating expenses the same year were $33,175. Operation and maintenance (O&M) expenses for FY 20/21 included $3,171 (9.6%) for the Utilities line item, which only includes Pacific Gas and Electric (PG&E) energy costs.

CSA 13 does not currently have any existing debt nor any short-lived asset reserves.

E. WATER / ENERGY / WASTE AUDIT

The County has not conducted any water, energy, or waste audits related to the water distribution system.

III. NEED FOR PROJECT

A. HEALTH, SANITATION, AND SECURITY

In recent years, devastating wildland fires have ravaged small alpine communities in California leaving already struggling communities in a difficult position to rebuild. Due to the increase in frequency and severity of droughts and wildfires from the effects of climate change, protecting these communities is a high priority. CSA 13 provides water and fire suppression protection for a DAC with the only medical center in the vicinity. In analyzing the water system with the GIS-based modeling software Infowater by Innovyze, the water system is unable to provide sufficient fire protection to the community and medical center. Addressing the lack of adequate fire protection for the community, and specifically the medical center, is of high importance to the health and safety of the community residents. Additionally, constructing improvements at the wells, specifically Well No. 2, to safeguard CSA 13's water source from potential vandalism, the elements, and coliform contamination is critical for the health, sanitation, and security of the community.

B. AGING INFRASTRUCTURE

The water system south of Highway 44 has six known fire hydrants, but the entire south water system was installed in the early 1980s, is leaking, is considered nonfunctioning, and has likely exceeded its useful life; therefore, it needs to be replaced.

C. REASONABLE GROWTH

Given that there has been a recent population decline in the County's unincorporated areas, together with no developments proposed for connection to the water system, growth in CSA 13 in the next 20 years is assumed to be negligible. Improvements recommended herein are needed to meet current demands. The Shingletown Medical Center has expressed a desire to expand; therefore, improvements recommended herein do consider this expansion.

The recommended project is consistent with the Shasta County General Plan to provide potable water to existing County residents. Additionally, the proposed project is consistent with LAFCO's goal to discourage urban sprawl by providing adequate urban services, including police, fire, water, and sanitation services.

IV. ALTERNATIVES CONSIDERED

Alternatives were generated to address CSA 13 needs. The water infrastructure is nonfunctional south of Highway 44, and the operable system north of Highway 44 is unable to provide adequate fire flow protection, posing a risk to the health and safety of community residents. The proposed recommended project will install the needed infrastructure to replace the nonfunctional components of the system and provide sufficient fire protection to the community including the medical center.

Although extensive improvements to the existing wells and potable water storage tanks are needed in the near future, the scope of alternatives considered and the project recommended herein are primarily specific to fire suppression improvements as this is identified as the primary need in CSA 13 at this time. At a minimum, it is recommended the Well No. 2 wellhead, valving, and electrical be placed inside a covered building for protection from the elements and to minimize future total coliform issues. Therefore, these improvements have been included in all considered alternatives.

A. DESCRIPTIONS

There are a number of alternative solutions considered herein to address the fire suppression issues described hereinbefore, including:

1 – Water Main Extension
2 – Water Main Loop
3 – Water Main Extension with New Water Tank
4 – Water Main Loop with New Water Tank
5 – Do Nothing

Alternative 1 – Water Main Extension

Alternative 1 consists of extending the existing 8-inch water main from its terminus on Emigrant Trail south across Highway 44 and along Alpine Meadows Road to the existing fire hydrant near Woodridge Drive. See Figure 3. The existing 10-inch fire line and 4-inch domestic pipelines would be abandoned. The existing water services would be connected to the new water main. This is the most economical of the alternatives with a preliminary cost estimate of $1.94M. Refer to Table 3. However, with Alternative 1, available fire flow at the Shingletown Medical Center would only be approximately 1,100 GPM, which is not sufficient to meet the required minimum

fire flow of 1,750 GPM for two hours. This fire flow requirement is based on the existing medical center reportedly being just under 4,800 square feet (SF) with Type V-B construction.

Alternative 2 – Water Main Loop

Alternative 2 consists of extending the water main as described in Alternative 1, and then continuing the extension along Alpine Meadows Road north across Highway 44 and along a proposed easement to Whispering Creek Court where it would connect to the existing 8-inch water main. Refer to Figure 4. The estimated cost for these improvements is $2.40M. See Table 4. This looped system would allow for a much higher fire flow than Alternative 1, with an estimated resulting fire flow at the Shingletown Medical Center of 1,780 GPM. While this would meet the existing required fire flow of 1,750 GPM, it would not allow for any expansion of the medical center, which is reportedly planned in the near future.

Alternative 3 – Water Main Extension with New Water Tank

Alternative 3 consists of constructing the water main extension described in Alternative 1 and then continuing the extension with 12- and 14-inch pipelines to a County-owned parcel to the east, where a new 240,000-gallon tank would be constructed. See Figure 5. It should be noted that Alternative 1 could be constructed as Phase 1 for this alternative. This would significantly improve fire flows at the Shingletown Medical Center with resulting flows upward of 3,600 GPM for two hours at an estimated cost of $3.88M. Refer to Table 5. This alternative would allow for future expansion of the medical center, up to 18,000 SF.

Alternative 4 – Water Main Loop with New Water Tank

Alternative 4 consists of constructing the water main loop described in Alternative 2, as well as the water main extension and new tank described in Alternative 3. Refer to Figure 6. It should be noted that Alternative 2 could be constructed as Phase 1 for this alternative. This is the most expensive alternative, with a preliminary cost estimate of $4.33M and would only marginally improve fire flow at the Shingletown Medical Center compared to Alternative 3, with resulting flows estimated at 3,625 GPM. See Table 6.

Alternative 5 – Do Nothing

The Do Nothing Alternative allows for continued public risks from inadequate fire protection. Therefore, this alternative is not feasible and is not considered further.

B. DESIGN CRITERIA

The design criteria used for evaluation of all alternatives was generated from available historical data as well as industry-recognized design standards adopted by local regulatory agencies, including the State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW). In addition, Shasta County Fire Safety Standards were adhered to for determining fire flow requirements.

C. MAPS

Refer to Figures 3 through 6 for the proposed water system improvement alternatives considered.

D. ENVIRONMENTAL IMPACTS

The proposed alternatives do not appear to have any lasting significant impact on land resources, historic sites, wetlands, flood plains, endangered species, or critical habitat. If Alternative 3 or 4 is constructed, a Timber Harvest Plan will be developed for the future tank site. The project design and construction will need the appropriate permits to be obtained and will take into account typical specific mitigation measures so as to not impact natural resources. California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) documentation will need to be prepared.

E. LAND REQUIREMENTS

The considered alternatives would take place within existing publicly owned right-of-way and County-owned land with two exceptions. The first exception is that the looped water system (Alternatives 2 & 4) would require acquisition of a permanent utility easement to install a main between Highway 44 and Whispering Creek Court.

The second exception is that the proposed tank site (Alternatives 3 & 4) is currently owned by the County, but the new storage tank would require a permanent utility easement from Woodridge Drive to the tank site to install connecting pipeline from the existing water system to the new tank and for access to the site.

F. POTENTIAL CONSTRUCTION PROBLEMS

Due to seasonal weather conditions in the area, construction that requires trench paving or tank painting is not advised from approximately October 15 through April 15. The cold temperatures that are prevalent during this time period significantly impact the ability to pave, perform trench compaction, and paint water storage tanks.

G. SUSTAINABLE CONSIDERATIONS

Water and Energy Efficiency: Water and energy efficiency will both be increased as a result of this project. The proposed alternatives all include replacement of sections of the water system that have a history of significant leaks. Reducing the number of leaks in the system will not only reduce O&M but will minimize the amount of unaccounted-for water loss in the system thus reducing the amount of pumping required. More efficient usage of existing water supplies will better prepare the community for future water shortages that will result due to climate change and increase water available for fire suppression.

H. COST ESTIMATES

The total estimated project costs for the considered alternatives are shown in Tables 3 through 6. Construction costs are based upon similar prevailing wage rate public works projects constructed in northern California and include a 10% construction contingency. Costs are inflated by the Engineering News Record Construction Cost Index (ENRCCI), which stands at 13,111 for June 2022. Construction costs are based on American Iron and Steel (AIS) requirements as required by USDA RD.

I. O&M COST ESTIMATE

Improvements considered and recommended herein will have a relatively low impact on existing daily O&M costs, although operator time and costs spent fixing leaks will be reduced.

V. SELECTION OF AN ALTERNATIVE

A. LIFE CYCLE COST ANALYSIS

Life Cycle Cost (LCC) analysis is a tool to determine the most cost-effective option among competing alternatives to purchase, own, operate, maintain, and finally dispose of an object or process. Each alternative should be equally appropriate to be implemented on technical grounds. All the costs are totaled to a present-day value known as net present worth (NPW) or present worth. LCC estimates are based on time of construction and include costs for construction, indirect costs, O&M, and salvage value.

LCC analysis parameters include:

1. Construction costs based on June 2022 dollars (ENRCCI = 13,111).
2. Discount or interest rate based upon the Real Discount Rate, which is a forecast of real interest rates from which the inflation premium has been removed and based on the economic assumptions for the Federal 2021 Budget. Real rates are used for discounting constant-dollar flows, as is often required in cost-effectiveness analysis. The 20-year Real Interest Rate is -0.5% according to the Office of Management and Budget Circular No. A-94, revised December 2020.
3. To be conservative, projected annual O&M for all considered alternatives is assumed unchanged from existing operations.
4. Salvage value was determined using typical life expectancies shown in Table 7, which was taken from the US Environmental Protection Agency Asset Management: A Handbook for Small Drinking Water Systems. EPA 816-R-03-016. September 2003. Calculated salvage value was projected to the end of the 20-year LCC period with an assumed useful life of the improvements of 40 years.

LCC for alternatives considered are shown in Table 8. As shown therein, Alternative 1, Water Main Extension, is anticipated to have the lowest capital cost and therefore the lowest LCC, followed by Alternative 2. Alternative 4 would have the highest capital cost and highest LCC accordingly.

B. NON-MONETARY FACTORS

Non-monetary factors can be considered when evaluating alternatives if the range between present worth values is small. Alternatives were further analyzed and ranked using the non-monetary factor decision matrix shown in Table 9. This matrix utilized six evaluation criteria. Ranking of evaluation criteria was accomplished with weighting factors utilizing a scoring of 10 as most favorable and 1 as least favorable. The non-monetary criteria and weighting factors are subject to interpretation and discussion by those familiar with public works projects including regulators, responsible public agencies, engineers, funding agencies, and County staff.

Non-monetary factors considered include ability to achieve required fire flow, simplicity of operation, future serviceability and reliability, likelihood of implementation, security and safety to workers and the public, and environmental impacts. As shown in Table 9, primarily due to the best ability to achieve required fire flow and likelihood of implementation, Alternative 3 is preferred based upon non-monetary criteria.

C. RECOMMENDED ALTERNATIVE

Alternatives 1 and 2 are unable to provide adequate fire flows and are therefore not considered further. Alternatives 3 and 4 provide sufficient fire flow; however, Alternative 4 costs substantially more with very little return. This, together with Alternative 3 being preferred based on non-monetary criteria, results in Alternative 3 as the recommended project to be pursued. As mentioned hereinbefore, Alternative 1 could be constructed as Phase 1 for the recommended alternative.

VI. PROPOSED PROJECT

A. PRELIMINARY PROJECT DESIGN

Approximately 450 feet of new 8-inch water main would be extended from the current water main terminus on Emigrant Trail south across Highway 44 down Wilson Hill Road. It is anticipated that Caltrans will require a 12-inch steel casing to be bored and jacked under Highway 44. An estimated 1,650 feet of new 12-inch water main would be installed in Alpine Meadows Road from the new 8-inch main in the intersection with Wilson Hill Road to the intersection of Woodridge Drive where it would connect to a new 14-inch pipeline to the tank as described in the paragraph below. All six existing fire hydrants along this alignment would be replaced and connected to the new main.

A new bolted steel, above-grade 0.25-million gallon (MG) water storage tank would be constructed to meet the project needs and objectives described hereinbefore. The new tank would be located on a County-owned parcel on the south side of Highway 44, east of Alpine Meadows Road, at a similar elevation to Tank Nos. 1 and 2. Approximately 1,150 linear feet of new 14-inch pipeline would be constructed from the tank to the intersection of Alpine Meadows Road and Woodridge Drive, where it would connect to the new 12-inch main as described hereinbefore. The pipeline would supply water both to and from the new tank.

To develop the new tank site, a 15-foot-wide by 750-foot-long gravel-surfaced, all-weather access road would be constructed leading from Woodridge Drive between the residences of 31477 and 31465 Woodridge Drive, up to the new tank site. Additionally, a 12-foot-wide access road would be constructed around the perimeter of the tank.

The proposed tank would be bolted steel, coated with epoxy paint on the interior and zinc/acrylic on the exterior, about 30 feet in diameter, and about 50 feet tall. The maximum height to water surface would be about 48 feet from the bottom of the tank. The tank would feature an access ladder with an anti-climb shield and safety cage with landings as required by the Occupational Safety and Health Administration. The new tank site would be fenced to minimize vandalism as required by DDW.

The improvements to Well No. 2 are comprised of inspecting and cleaning the existing well casing, constructing a 400-square-foot building around the well, and relocating the sampling station, electrical, and controls inside the new building. Finally, a security fence will be installed around the site.

B. PROJECT SCHEDULE

Assuming the County is able to obtain USDA RD funding for construction of the recommended project, the anticipated project schedule is shown in Table 10.

C. PERMIT REQUIREMENTS

The following permits and approvals will likely be needed prior to implementation of the proposed project:

- Shasta County – Adopted Environmental Documents for proposed project
- Central Valley Regional Water Quality Control Board (CVRWQCB) – Construction General Permit and preparation of a Storm Water Pollution Prevention Plan
- California Department of Forestry and Fire Protection – Timber Harvest Permit
- California Department of Transportation – Encroachment Permit

The following permits may be needed prior to implementation of the proposed project and will be determined during completion of environmental documentation:

- CVRWQCB – Clean Water Act Section 401 Certification
- California Department of Fish and Wildlife – Section 1600 Lake and Streambed Alteration Agreement

D. SUSTAINABILITY CONSIDERATIONS

The proposed project will replace the aging water system infrastructure south of Highway 44 that has a history of water losses through leaks. Addressing these leaks will ensure that water is utilized efficiently and excess water does not continue to go unaccounted for.

Reduced unaccounted-for water loss will also result in an energy savings, as less water will need to be pumped.

E. TOTAL PROJECT COST ESTIMATE

The total project cost estimate for the proposed project is detailed in Table 5. Construction costs are based on AIS requirements per USDA RD guidelines. Total project costs are based on June 2022 dollars (ENRCCI = 13,111) but have been projected forward to construction in 2023.

F. ANNUAL OPERATING BUDGET

Income

In FY 20/21, the operating water revenue for CSA 13 was $21,682.

Annual O&M Costs

The improvements recommended in this project will have a relatively low impact on existing daily O&M costs. However, O&M costs will increase proportionate to the change in the consumer price index and salary increases. O&M water expenses for FY 20/21 were $33,175 and are projected in Table 12 to be $36,251 in FY 23/24.

Debt Repayment

CSA 13 currently has no debt service. Two debt repayment scenarios were analyzed. The first scenario assumes the project is funded 100% with a USDA RD low-interest loan as shown in Table 13. The second scenario assumes the project is funded with 45% USDA RD grant and the rest with a USDA RD low-interest loan as shown in Table 14. For planning purposes, the interest rate on the 40-year USDA RD loan is assumed at 3.0%.

Reserves

Operating Reserves: At the end of FY 20/21, CSA 13 had a balance of approximately $107,778, or about 184% of operating expenses for that year.

Short-Lived Assets Reserve: A breakdown of short-lived assets is shown in Table 11 and reflects those assets with a useful life of five to fifteen years. The short-lived assets reserve is intended to collect revenue to replace those assets at the end of their service life. As indicated, the total annual revenue needed to fund this reserve is about $18,300 per year.

Debt Service Reserve: CSA 13 will need to establish a reserve of 10% of the annual debt repayment.

VII. CONCLUSION AND RECOMMENDATIONS

Based upon the available information to date, the recommended project consists of the items summarized in Section VI. Advantages of the recommended alternative include:

- Replacement of aging, leaking, and non-functioning water system infrastructure
- Provide adequate water storage and fire flow capacity
- Safeguard CSA 13's primary water source

The total project cost, including indirect costs for administration and engineering, is estimated at $3,878 ,900 in June 2022 dollars. Refer to Table 5 for the Total Project Cost Estimate, which includes a 10% project contingency. The recommended project does not appear to be financially feasible, and the County should consider a phased approach, with Alternative 1 being Phase 1 and the remaining elements completed in Phase 2. However, a debt repayment analysis for Alternative 1 was evaluated, and Phase 1 does not appear to be financially feasible, even with the reduced scope. It is recommended the County continue to seek other sources of grant assistance to fund construction of the recommended project, either as phases or as one project.

PACE Engineering, Inc., CSA 13 PSA for Alpine Meadows Fire Suppression System Improvement Project, County Contract No. 610545, $380,000.

TABLES

Table 1: Mitigation Monitoring Checklist

Mitigation Measure		Monitoring Action
Work Area		
1	Minimize Work Area	Define limits of work area in Contract Documents and delineate any sensitive areas that are to be left undisturbed.
2	Erosion Control	Establish erosion control procedures in Contract Documents including sensitive areas to be left undisturbed. Standard practices required by the County will be strictly adhered to by the construction contractor and enforced by the Engineer.
3	Revegetation of Disturbed Areas	All areas disturbed shall be seeded and mulched. Revegetation shall consist of native species, grasses, and forbs. Revegetation efforts shall be in place prior to the return of the wet season and in no case later than October 15th of each season.
Construction Activities		
1	Dust Control	Roads and work areas likely to generate dust shall be watered during construction activities and swept clean where possible.
2	Noise Control	Work hours will be limited typically to weekdays between the hours of 7 a.m. to 5 p.m. in residential areas unless special activities, i.e. tie-ins, are required at night during periods of low flow times.
Sensitive Resources		
1	Subsurface Cultural Resources	If subsurface cultural materials are encountered during construction activities, all activities shall be halted within a 50-foot radius and an archaeologist called in to examine the artifacts and determine if additional mitigation measures are required.
2	Migratory Birds	To ensure that active nests of migratory birds are not disturbed, vegetation removal and construction activities shall occur between August 31 and February 1, if feasible. If vegetation removal or construction must occur during the nesting season, a nesting survey shall be conducted by a qualified biologist to identify active nests. If nesting birds are found, the nest sites shall not be disturbed until after the young have fledged. Further, to prevent nest abandonment and mortality of chicks and eggs, no vegetation removal or construction activities shall occur within 500 feet of an active nest, unless a smaller buffer zone is authorized by the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service.

Table 2: History of Major CSA 13 System Components

System Component	Name	Year Constructed	Year(s) Renovated
Water Source	Well No. 1	1991	-
Water Source	Well No. 2	1991	-
Storage Tank	Tank No. 1	1991	-
Storage Tank	Tank No. 2	2016	-

Table 3: Alternative 1 Preliminary Cost Estimate

No.	Item	Quantity	Unit	Unit Cost[1]	Total Cost
Construction Costs					
Pipeline Improvements					
1	12" Water Main with Class A3 Backfill, complete	150	LF	$220	$33,000
2	12" Water Main with Class A1 Backfill, complete	1,500	LF	$195	$292,500
3	Bore & Jack 12" Steel Casing with 8" Water Main, complete	120	LF	$545	$65,400
4	8" Water Main with Class A5 Backfill, complete	100	LF	$175	$17,500
5	8" Water Main with Class A3 Backfill, complete	350	LF	$155	$54,250
6	6" Water Main with Class A5 Backfill, complete	100	LF	$165	$16,500
7	6" Water Main with Class A1 Backfill, complete	50	LF	$135	$6,750
8	12" Gate Valves	2	EA	$4,500	$9,000
9	8" Gate Valves	3	EA	$3,100	$9,300
10	6" Gate Valves (includes FH 6" Gate Valves)	6	EA	$2,700	$16,200
11	Fire Hydrants (w/o 6" Gate Valves)	6	EA	$8,400	$50,400
12	New Water Services & Meter, Complete	3	EA	$5,400	$16,200
13	Trench Sheeting, Shoring, and Bracing, Complete	1	LS	$1,300	$1,300
14	Traffic Control	1	LS	$32,500	$32,500
15	Project Sign	1	LS	$2,200	$2,200
16			***Subtotal Pipeline Improvements Construction Cost***		**$623,000**
Well No. 2 Improvements					
17	Mobilization, Bonds, Insurance, & Demobilization	1	LS	$52,000	$52,000
18	Building (20'x20')	400	SF	$260	$104,000
19	Modify Existing Piping	1	LS	$31,000	$31,000
20	Well Casing Inspection and Cleaning	1	LS	$41,500	$41,500
21	Modify Existing Site Electrical	1	LS	$31,000	$31,000
22	Emergency Generator & Automatic Transfer Switch (ATS)	1	LS	$153,000	$153,000
23	HVAC	1	LS	$15,600	$15,600
24	Site Grading & Aggregate Base Around Site	1	LS	$15,600	$15,600
25	Painting & Misc	1	LS	$10,400	$10,400
26	Fencing	1	LS	$20,750	$20,750
27	Sheeting, Shoring, & Bracing	1	LS	$1,050	$1,050
28			***Subtotal Well No. 2 Improvements Construction Cost***		**$475,900**
29			***Subtotal Construction Costs***		**$1,098,900**
30			***Inflation Adder for Construction in 2023/2024 @ 6% Per Year***		$66,000
31			***TOTAL CONSTRUCTION COSTS***		***$1,164,900***
Indirect Costs					
32	County Project Administration				$10,000
33	Preliminary Engineering Report				$30,000
34	Assessment District Engineer's Report				$30,000
35	USDA Funding Coordination				$25,000
36	Environmental Documentation				$35,000
37	Topographic Survey				$35,000
38	Geotechnical Investigation				$23,000
39	Design				$140,000
40	Legal/Bond Counsel				$40,000
41	Bidding/Contract Award Services				$25,000
42	Construction Engineering Services				$104,000
43	Resident Project Representative				$101,000
44	Environmental Services During Construction				$7,500
45	Permits				$15,000
46	Post Construction Services				$10,000
47	As-Built (Record) Drawings				$7,000
48				***TOTAL INDIRECT COSTS***	$637,500
49				***Inflation for Indirect Costs to FY 2023/2024 @ 3% Per Year***	$19,000
50				***Subtotal Project Cost***	$1,821,400
51				***Project Contingencies @ 10% of Construction Costs***	$117,000
				TOTAL PROJECT COST	***$1,938,400***

1. All costs in June 2022 dollars at an ENR index of 13111.

Table 4: Alternative 2 Preliminary Cost Estimate

No.	Item	Quantity	Unit	Unit Cost[1]	Total Cost
Construction Costs					
	Pipeline Improvements				
1	12" Water Main with Class A3 Backfill, complete	150	LF	$220	$33,000
2	12" Water Main with Class A1 Backfill, complete	1,500	LF	$195	$292,500
3	8" Water Main installed via HDD, complete	825	LF	$245	$202,200
4	Bore & Jack 12" Steel Casing with 8" Water Main, complete	180	LF	$545	$98,100
5	8" Water Main with Class A5 Backfill, complete	125	LF	$175	$21,900
6	8" Water Main with Class A3 Backfill, complete	710	LF	$155	$110,100
7	6" Water Main with Class A5 Backfill, complete	100	LF	$165	$16,500
8	6" Water Main with Class A1 Backfill, complete	60	LF	$135	$8,100
9	12" Gate Valves	2	EA	$4,500	$9,000
10	8" Gate Valves	5	EA	$3,100	$15,500
11	6" Gate Valves (includes FH 6" Gate Valves)	6	EA	$2,700	$16,200
12	Fire Hydrants (w/o 6" Gate Valves)	6	EA	$8,400	$50,400
13	New Water Services & Meter, Complete	3	EA	$5,400	$16,200
14	Trench Sheeting, Shoring, and Bracing, Complete	1	LS	$1,300	$1,300
15	Traffic Control	1	LS	$32,500	$32,500
16	Project Sign	1	LS	$2,200	$2,200
17			***Subtotal Pipeline Improvements Construction Cost***		**$925,700**
	Well No. 2 Improvements				
18	Mobilization, Bonds, Insurance, & Demobilization	1	LS	$52,000	$52,000
19	Building (20'x20')	400	SF	$260	$104,000
20	Modify Existing Piping	1	LS	$31,000	$31,000
21	Well Casing Inspection and Cleaning	1	LS	$41,500	$41,500
22	Modify Existing Site Electrical	1	LS	$31,000	$31,000
23	Emergency Generator & Automatic Transfer Switch (ATS)	1	LS	$153,000	$153,000
24	HVAC	1	LS	$15,600	$15,600
25	Site Grading & Aggregate Base Around Site	1	LS	$15,600	$15,600
26	Painting & Misc	1	LS	$10,400	$10,400
27	Fencing	1	LS	$20,750	$20,750
28	Sheeting, Shoring, & Bracing	1	LS	$1,050	$1,050
29			***Subtotal Well No. 2 Improvements Construction Cost***		**$475,900**
30			***Subtotal Construction Costs***		**$1,401,600**
31			***Inflation Adder for Construction in 2023/2024 @ 6% Per Year***		$84,000
32			***TOTAL CONSTRUCTION COSTS***		***$1,485,600***
Indirect Costs					
33	County Project Administration				$10,000
34	Preliminary Engineering Report				$30,000
35	Assessment District Engineer's Report				$30,000
36	USDA Funding Coordination				$25,000
37	Environmental Documentation				$65,000
38	Topographic Survey				$45,000
39	Geotechnical Investigation				$35,000
40	Design				$149,000
41	Legal/Bond Counsel				$40,000
42	Bidding/Contract Award Services				$30,000
43	Construction Engineering Services				$119,000
44	Resident Project Representative				$118,000
45	Environmental Services During Construction				$12,500
46	Permits				$20,000
47	Post Construction Services				$10,000
48	As-Built (Record) Drawings				$8,000
49			***TOTAL INDIRECT COSTS***		$746,500
50			***Inflation for Indirect Costs to FY 2023/2024 @ 3% Per Year***		$22,000
51			***Subtotal Project Cost***		$2,254,100
52			***Project Contingencies @ 10% of Construction Costs***		$149,000
			TOTAL PROJECT COST		***$2,403,100***

1. All costs in June 2022 dollars at an ENR index of 13111.

Table 5: Alternative 3 Preliminary Cost Estimate

No.	Item	Quantity	Unit	Unit Cost[1]	Total Cost
Construction Costs					
Pipeline Improvements					
1	12" Water Main with Class A3 Backfill, complete	150	LF	$220	$33,000
2	12" Water Main with Class A1 Backfill, complete	1,500	LF	$195	$292,500
3	Bore & Jack 12" Steel Casing with 8" Water Main, complete	120	LF	$545	$65,400
4	8" Water Main with Class A5 Backfill, complete	100	LF	$175	$17,500
5	8" Water Main with Class A3 Backfill, complete	350	LF	$155	$54,300
6	6" Water Main with Class A5 Backfill, complete	100	LF	$165	$16,500
7	6" Water Main with Class A1 Backfill, complete	50	LF	$135	$6,800
8	12" Gate Valves	2	EA	$4,500	$9,000
9	8" Gate Valves	3	EA	$3,100	$9,300
10	6" Gate Valves (includes FH 6" Gate Valves)	6	EA	$2,700	$16,200
11	Fire Hydrants (w/o 6" Gate Valves)	6	EA	$8,400	$50,400
12	New Water Services & Meter, Complete	3	EA	$5,400	$16,200
13	Trench Sheeting, Shoring, and Bracing, Complete	1	LS	$1,300	$1,300
14	Traffic Control	1	LS	$32,500	$32,500
15	Project Sign	1	LS	$2,200	$2,200
16				***Subtotal Pipeline Improvements Construction Cost***	**$623,100**
Water Tank					
17	14" Water Main with Class A3 Backfill, complete	100	LF	$260	$26,000
18	14" Water Main with Class A1 Backfill, complete	1,050	LF	$240	$252,000
19	14" Gate Valves	3	EA	$6,500	$19,500
20	Construct Tank Concrete Ring Wall/Foundation	1	LS	$130,000	$130,000
21	Below Tank Piping and Site	1	LS	$10,400	$10,400
22	Tank Erection and Painting	1	LS	$483,000	$483,000
23	Misc Electrical and Telemetry	1	LS	$54,000	$54,000
24	Tree Removal	1	LS	$22,000	$22,000
25	Earthwork, Site Work, and Grading	1	LS	$156,000	$156,000
26	3" Asphalt	1	LS	$32,000	$32,000
27	Agg Base	1	LS	$104,000	$104,000
28	Fencing	1	LS	$48,300	$48,300
29	Clean Up, Testing, Submittals, Equip Manuals	1	LS	$3,800	$3,800
30	11-Month Warranty Inspection	1	LS	$5,400	$5,400
31				***Subtotal Water Tank Construction Cost***	**$1,346,400**
Well No. 2 Improvements					
32	Mobilization, Bonds, Insurance, & Demobilization	1	LS	$52,000	$52,000
33	Building (20'x20')	400	SF	$260	$104,000
34	Modify Existing Piping	1	LS	$31,000	$31,000
35	Well Casing Inspection and Cleaning	1	LS	$41,500	$41,500
36	Modify Existing Site Electrical	1	LS	$31,000	$31,000
37	Emergency Generator & Automatic Transfer Switch (ATS)	1	LS	$153,000	$153,000
38	HVAC	1	LS	$15,600	$15,600
39	Site Grading & Aggregate Base Around Site	1	LS	$15,600	$15,600
40	Painting & Misc	1	LS	$10,400	$10,400
41	Fencing	1	LS	$20,750	$20,750
42	Sheeting, Shoring, & Bracing	1	LS	$1,050	$1,050
43				***Subtotal Well No. 2 Improvements Construction Cost***	**$475,900**
44				***Subtotal Construction Costs***	$2,445,400
45				***Inflation Adder for Construction in 2023/2024 @ 6% Per Year***	$147,000
46				***TOTAL CONSTRUCTION COSTS***	***$2,592,400***
Indirect Costs					
47	County Project Administration				$10,000
48	Preliminary Engineering Report				$30,000
49	Assessment District Engineer's Report				$30,000
50	USDA Funding Coordination				$25,000
51	Environmental Documentation				$80,000
52	Topographic Survey				$52,000
53	Geotechnical Investigation				$29,000
54	Design				$208,000
55	Legal/Bond Counsel				$40,000
56	Bidding/Contract Award Services				$35,000
57	Construction Engineering Services				$193,000
58	Resident Project Representative				$201,000
59	Environmental Services During Construction				$17,500
60	Permits				$25,000
61	Post Construction Services				$10,000
62	As-Built (Record) Drawings				$11,000
63				***TOTAL INDIRECT COSTS***	$996,500
64				***Inflation for Indirect Costs to FY 2023/2024 @ 3% Per Year***	$30,000
65				***Subtotal Project Cost***	$3,618,900
66				***Project Contingencies @ 10% of Construction Costs***	$260,000
				TOTAL PROJECT COST	***$3,878,900***

1. All costs in June 2022 dollars at an ENR index of 13111.

Table 6: Alternative 4 Preliminary Cost Estimate

No.	Item	Quantity	Unit	Unit Cost[1]	Total Cost
Construction Costs					
Pipeline Improvements					
1	12" Water Main with Class A3 Backfill, complete	150	LF	$220	$33,000
2	12" Water Main with Class A1 Backfill, complete	1,500	LF	$195	$292,500
3	8" Water Main installed via HDD, complete	825	LF	$245	$202,200
4	Bore & Jack 12" Steel Casing with 8" Water Main, complete	180	LF	$545	$98,100
5	8" Water Main with Class A5 Backfill, complete	125	LF	$175	$21,900
6	8" Water Main with Class A3 Backfill, complete	710	LF	$155	$110,100
7	6" Water Main with Class A5 Backfill, complete	100	LF	$165	$16,500
8	6" Water Main with Class A1 Backfill, complete	60	LF	$135	$8,100
9	12" Gate Valves	2	EA	$4,500	$9,000
10	8" Gate Valves	5	EA	$3,100	$15,500
11	6" Gate Valves (includes FH 6" Gate Valves)	6	EA	$2,700	$16,200
12	Fire Hydrants (w/o 6" Gate Valves)	6	EA	$8,400	$50,400
13	New Water Services & Meter, Complete	3	EA	$5,400	$16,200
14	Trench Sheeting, Shoring, and Bracing, Complete	1	LS	$1,300	$1,300
15	Traffic Control	1	LS	$32,500	$32,500
16	Project Sign	1	LS	$2,200	$2,200
17	***Subtotal Pipeline Improvements Construction Cost***				**$925,700**
Water Tank					
18	14" Water Main with Class A3 Backfill, complete	100	LF	$260	$26,000
19	14" Water Main with Class A1 Backfill, complete	1,050	LF	$240	$252,000
20	14" Gate Valves	3	EA	$6,500	$19,500
21	Construct Tank Concrete Ring Wall/Foundation	1	LS	$130,000	$130,000
22	Below Tank Piping and Site	1	LS	$10,400	$10,400
23	Tank Erection and Painting	1	LS	$483,000	$483,000
24	Misc Electrical and Telemetry	1	LS	$54,000	$54,000
25	Tree Removal	1	LS	$22,000	$22,000
26	Earthwork, Site Work, and Grading	1	LS	$156,000	$156,000
27	3" Asphalt	1	LS	$32,000	$32,000
28	Agg Base	1	LS	$104,000	$104,000
29	Fencing	1	LS	$48,300	$48,300
30	Clean Up, Testing, Submittals, Equip Manuals	1	LS	$3,800	$3,800
31	11-Month Warranty Inspection	1	LS	$5,400	$5,400
32	***Subtotal Water Tank Construction Cost***				**$1,346,400**
Well No. 2 Improvements					
33	Mobilization, Bonds, Insurance, & Demobilization	1	LS	$52,000	$52,000
34	Building (20'x20')	400	SF	$260	$104,000
35	Modify Existing Piping	1	LS	$31,000	$31,000
36	Well Casing Inspection and Cleaning	1	LS	$41,500	$41,500
37	Modify Existing Site Electrical	1	LS	$31,000	$31,000
38	Emergency Generator & Automatic Transfer Switch (ATS)	1	LS	$153,000	$153,000
39	HVAC	1	LS	$15,600	$15,600
40	Site Grading & Aggregate Base Around Site	1	LS	$15,600	$15,600
41	Painting & Misc	1	LS	$10,400	$10,400
42	Fencing	1	LS	$20,750	$20,750
43	Sheeting, Shoring, & Bracing	1	LS	$1,050	$1,050
44	***Subtotal Well No. 2 Improvements Construction Cost***				**$475,900**
45	***Subtotal Construction Costs***				$2,748,000
46	***Inflation Adder for Construction in 2023/2024 @ 6% Per Year***				$165,000
47	***TOTAL CONSTRUCTION COSTS***				***$2,913,000***
Indirect Costs					
48	County Project Administration				$10,000
49	Preliminary Engineering Report				$30,000
50	Assessment District Engineer's Report				$30,000
51	USDA Funding Coordination				$25,000
52	Environmental Documentation				$90,000
53	Topographic Survey				$59,000
54	Geotechnical Investigation				$41,000
55	Design				$234,000
56	Legal/Bond Counsel				$40,000
57	Bidding/Contract Award Services				$35,000
58	Construction Engineering Services				$208,000
59	Resident Project Representative				$218,000
60	Environmental Services During Construction				$22,500
61	Permits				$30,000
62	Post Construction Services				$10,000
63	As-Built (Record) Drawings				$12,000
64	***TOTAL INDIRECT COSTS***				$1,094,500
65	***Inflation for Indirect Costs to FY 2023/2024 @ 3% Per Year***				$33,000
66	***Subtotal Project Cost***				$4,040,500
67	***Project Contingencies @ 10% of Construction Costs***				$292,000
	TOTAL PROJECT COST				***$4,332,500***

1. All costs in June 2022 dollars at an ENR index of 13111.

Table 7: Estimated Useful Lives of Water System Equipment

Component	Useful Life (years)[1]
Intake Structures	35-45
Wells and Springs	25-35
Galleries and Tunnels	30-40
Chlorination Equipment	10-15
Other Treatment Equipment	10-15
Storage Tanks	30-60
Pumps	10-15
Buildings	30-60
Electrical Systems	7-10
Transmission Mains	35-40
Distribution Pipes	35-40
Valves	35-40
Blow-off Valves	35-40
Backflow Prevention	35-40
Meters	10-15
Service Lines	30-50
Hydrants	40-60
Lab/Monitoring Equipment	5-7
Tools and Shop Equipment	10-15
Landscaping/Grading	40-60
Office Furniture/Supplies	10
Computers	5
Transportation Equipment	10

1. Typical Life Expectancies taken from US Environmental Protection Agency Asset Management: A Handbook for Small Drinking Water Systems. EPA 816-R-03-016. September 2003. These numbers are ranges of expected useful lives drawn from a variety of sources. The ranges assume that assets have been properly maintained.

Table 8: Life Cycle Cost Analysis

Project	Total Construction Cost	Salvage Value	Salvage Value Present Worth (P/F, -0.5%, 20 Yrs)[1] PW Factor = 1.105	Net Present Worth
1 - Water Main Extension	$1,938,400	$499,243	$551,887	$551,887
2 - Water Main Loop	$2,403,100	$636,686	$703,823	$703,823
3 - Water Main Extension with New Water Tank	$3,878,900	$1,111,029	$1,228,185	$1,228,185
4 - Water Main Loop with New Water Tank	$4,332,500	$1,248,429	$1,380,073	$1,380,073

1. Present worth based on -0.5% 20-year discount rate. Interest rate based on real 20-year federal discount rate from Appendix C of OMB Circular A-94 per USDA PER guidelines: https://www.whitehouse.gov/wp-content/uploads/2020/12/M-21-09.pdf

Table 9: Non-Monetary Decision Matrix

No.	Criteria	Weight Factors	Alternative No.			
			1	2	3	4
1	Achieve Required Fire Flow (1,750 GPM)	50	1	8	9	10
2	Simplicity of Operation	5	10	9	7	6
3	Future Serviceability/Reliability	10	4	5	10	8
4	Likelihood of Implementation	15	10	5	8	1
5	Security & Safety to Workers/Public	10	4	5	8	9
6	Environmental Impacts	10	10	9	7	5
	Weighted Totals:	**100**	**43%**	**71%**	**86%**	**77%**

Notes:
1. Weighting based upon a scale from 1-10. 1 = Least Favorable, 10 = Most Favorable

Table 10: Project Schedule

Action	Target Date	Completion Date
County authorizes PACE to proceed with Preliminary Engineering Report (PER)		Apr 6, 2021
Draft PER sent to County for review		Nov 30, 2021
County provides comments on draft PER to PACE		May 12, 2022
PACE finalizes PER		June 6, 2022
County authorizes PACE to proceed with Environmental Documentation, Construction Documents, and USDA RD Construction Funding Application	July 1, 2022	
County adopts Environmental	Nov 30, 2022	
County submits USDA RD Construction Funding Application	Dec 30, 2022	
USDA issues Letter of Conditions	Feb 28, 2022	
Draft plans and specifications submitted to County and USDA RD	Jan 2, 2023	
Comments on draft plans and specifications received	Jan 31, 2023	
Final plans and specifications submitted to County	Feb 14, 2023	
Shasta County Board of Supervisors approve public bidding	Mar 28, 2023	
County/PACE advertise for public bids	Apr 4, 2023	
County hosts public bid opening	May 4, 2023	
Shasta County Board of Supervisors approve contract award	May 30, 2023	
County issues Notice to Proceed to Contractor	Jun 1, 2023	
Construction completed	Apr 30, 2024	

Table 11: Short-Lived Assets Reserve Schedule

Asset Description[1]	Replacement Period (Years)	Total Estimated Cost[2]	Estimated Annual Replacement Cost
Emergency Generator	10	$138,000	$13,800
Automatic Transfer Switch	10	$15,000	$1,500
Well Pump and Motor	15	$45,000	$3,000
		Equivalent Annual Replacement Cost:	$18,300

1. Short-lived assets include all equipment in the water system with a useful life of 5 to 15 years.
2. Total Estimated Costs are in June 2022 dollars at an ENR index of 13111.

Table 12: Current Projected Operations and Maintenance Costs

No.	Item	Actual O&M FY 2020/21	Yearly Inflation Factor	Projected O&M FY 23/24
1	Administration costs	$10,468	3%	$11,439
2	Maintenance operation expense	$850	3%	$929
3	Energy cost	$3,171	3%	$3,465
4	Monitoring and testing	$14,423	3%	$15,760
5	Professional and specialized services	$4,263	3%	$4,658
	Annual O&M Costs:	$33,175		$36,251

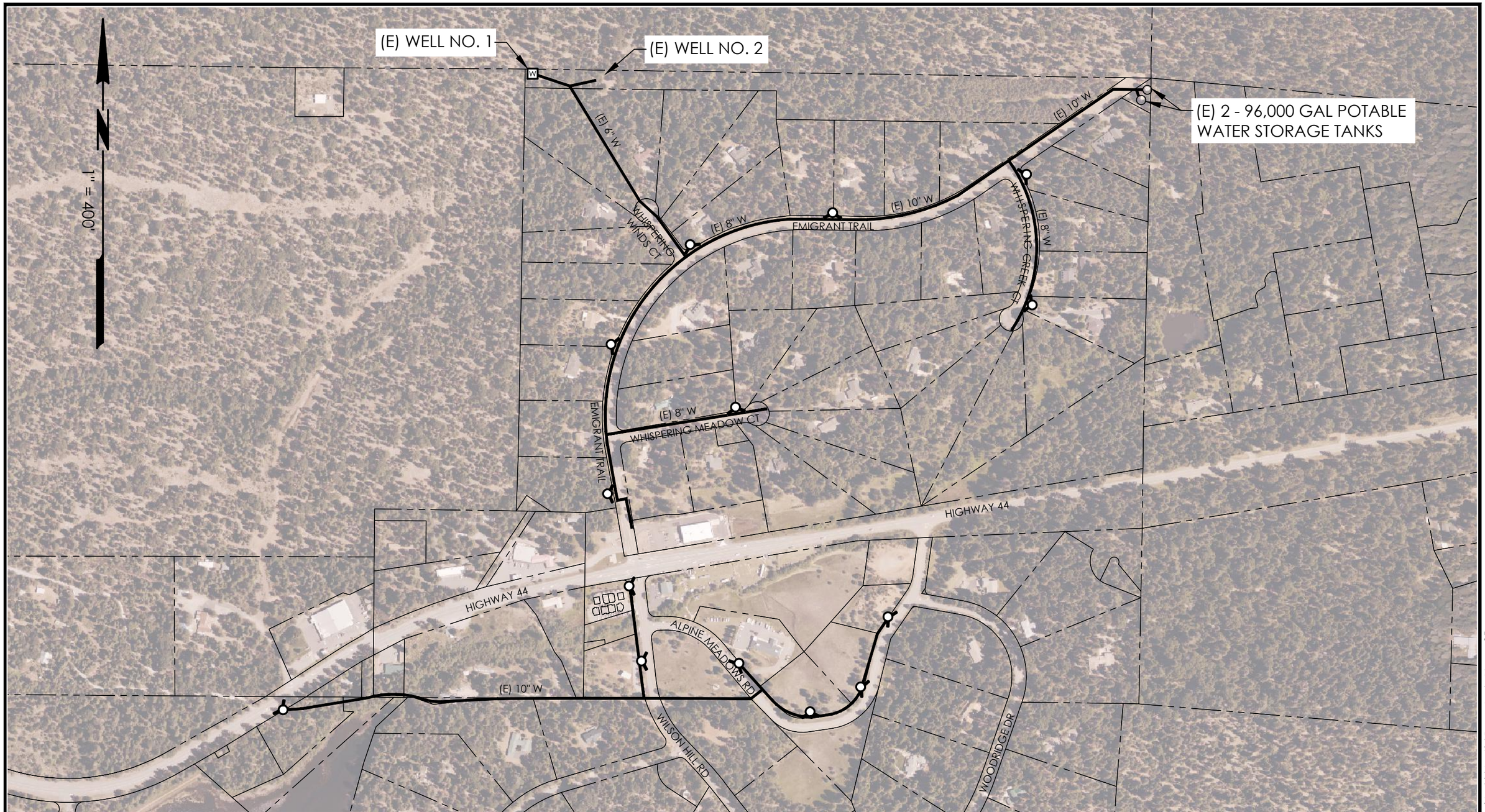
Table 13: Debt Repayment Schedule - 100% USDA RD Loan Scenario

Total Project Cost Amount	$3,878,900
Percentage of Grant from USDA	0%
Grant Amount	$0
Loan Amount	$3,878,900
Repayment Period	40
Interest Rate	3.000%
Annual Repayment Amount	$167,810
Debt Service Reserve at 10%	$16,781
Short-Lived Assets Reserve (See Table 11)	$18,300
Total Annual Cost	$202,891
Number of EDUs	31
Bi-Monthly Cost Per EDU	$1,090.81
Existing Bi-Monthly Cost Per EDU	$116.57
Future Bi-Monthly Cost Per EDU	$1,207.38

Table 14: Debt Repayment Schedule - 45% USDA RD Grant Scenario

Total Project Cost Amount	$3,878,900
Percentage of Grant from USDA	45%
Grant Amount	$1,745,505
Loan Amount	$2,133,395
Repayment Period	40
Interest Rate	3.000%
Annual Repayment Amount	$92,296
Debt Service Reserve at 10%	$9,230
Short-Lived Assets Reserve (See Table 11)	$18,300
Total Annual Cost	$119,825
Number of EDUs	31
Bi-Monthly Cost Per EDU	$644.22
Existing Bi-Monthly Cost Per EDU	$116.57
Future Bi-Monthly Cost Per EDU	$760.79

FIGURES



PACE ENGINEERING

CSA 13 ALPINE MEADOWS
FIRE SUPPRESSION SYSTEM IMPROVEMENT PROJECT
EXISTING WATER SYSTEM MAP

FIGURE 1

DATE: 12/21

JOB # 0199.107

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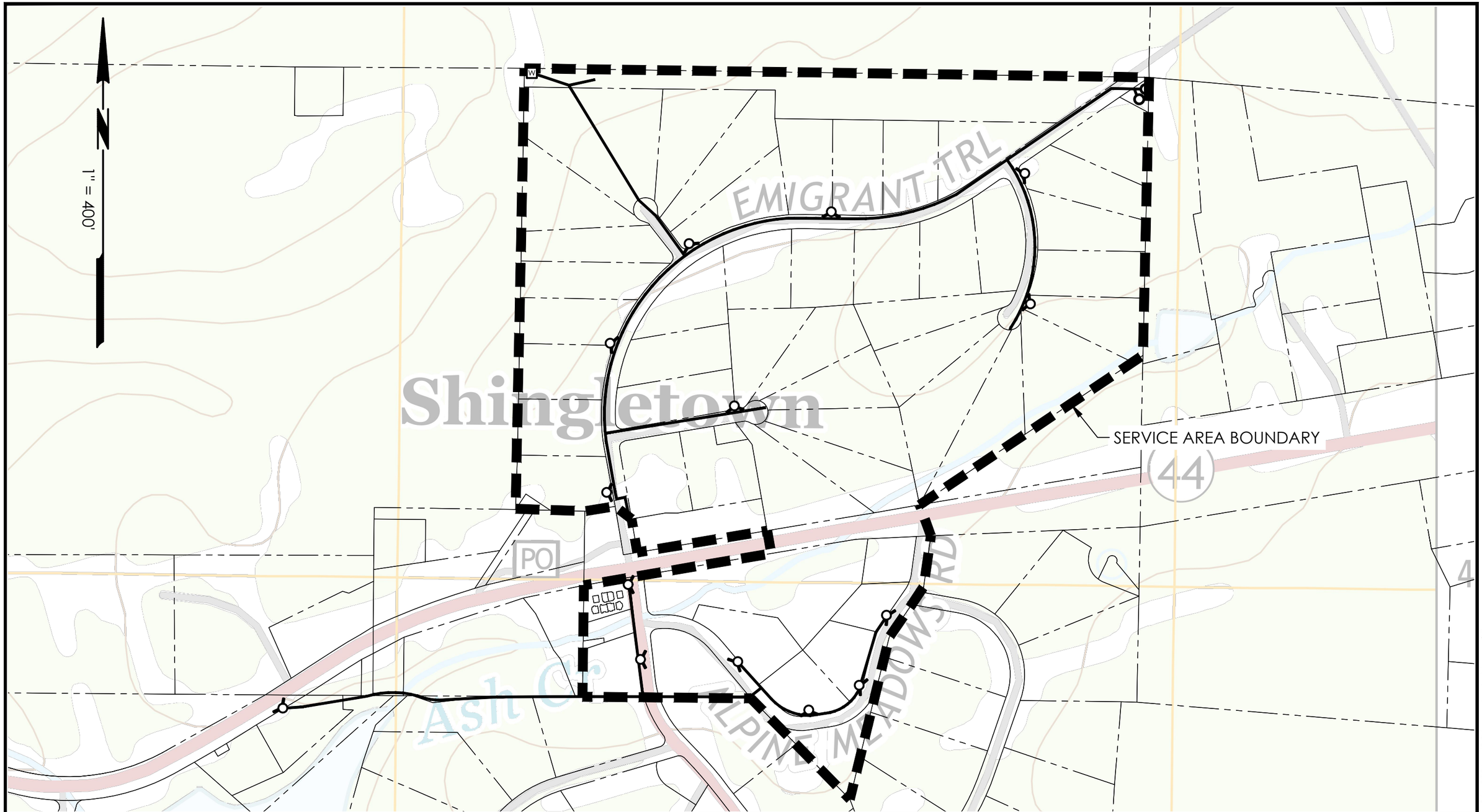

PACE ENGINEERING

CSA 13 ALPINE MEADOWS
FIRE SUPPRESSION SYSTEM IMPROVEMENT PROJECT
SERVICE AREA BOUNDARY

FIGURE 2

DATE: 12/21

JOB # 0199.107

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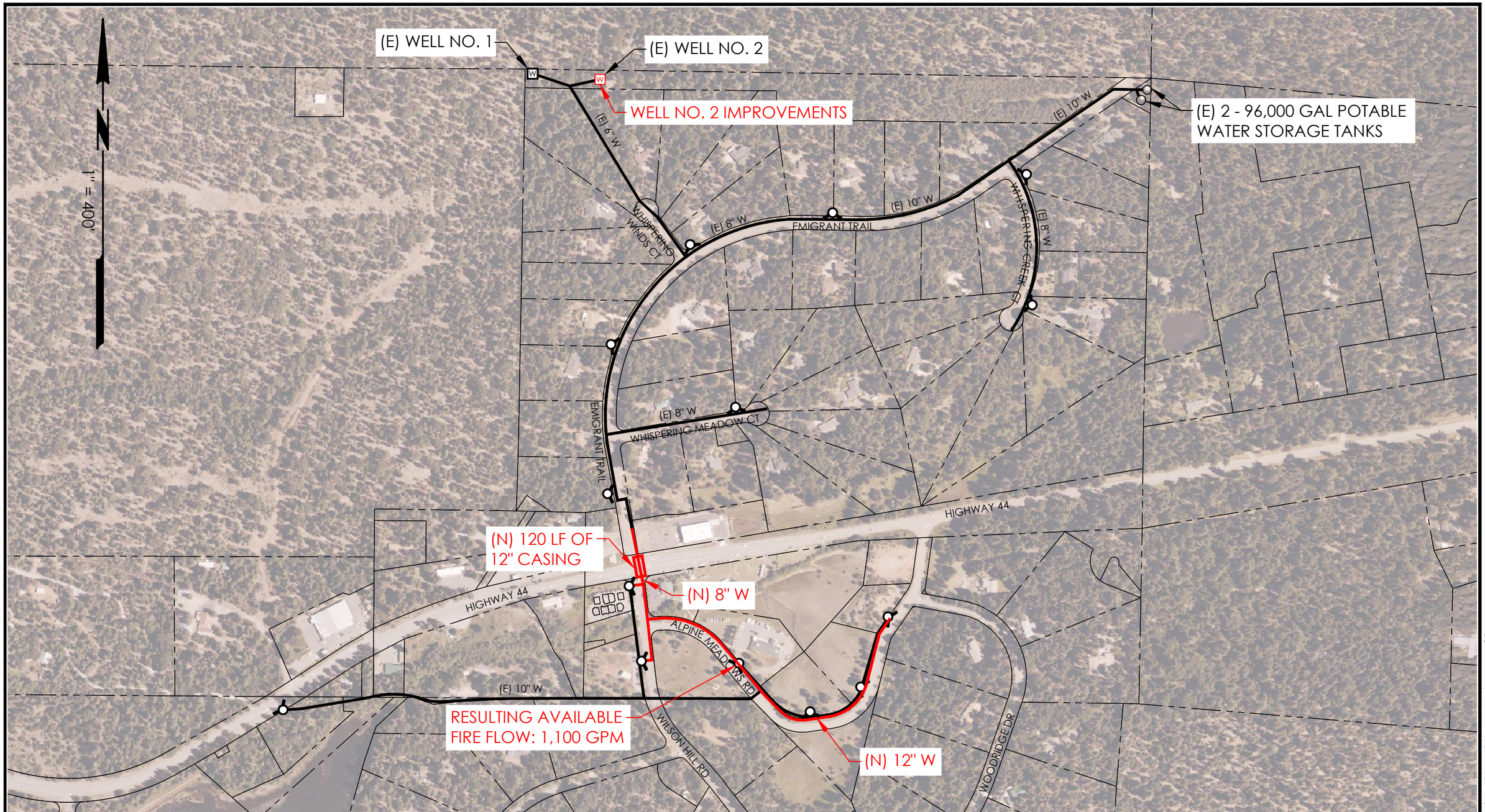

PACE ENGINEERING

CSA 13 ALPINE MEADOWS
FIRE SUPPRESSION SYSTEM IMPROVEMENT PROJECT
ALTERNATIVE 1

FIGURE 3

DATE: 12/21

JOB # 0199.107

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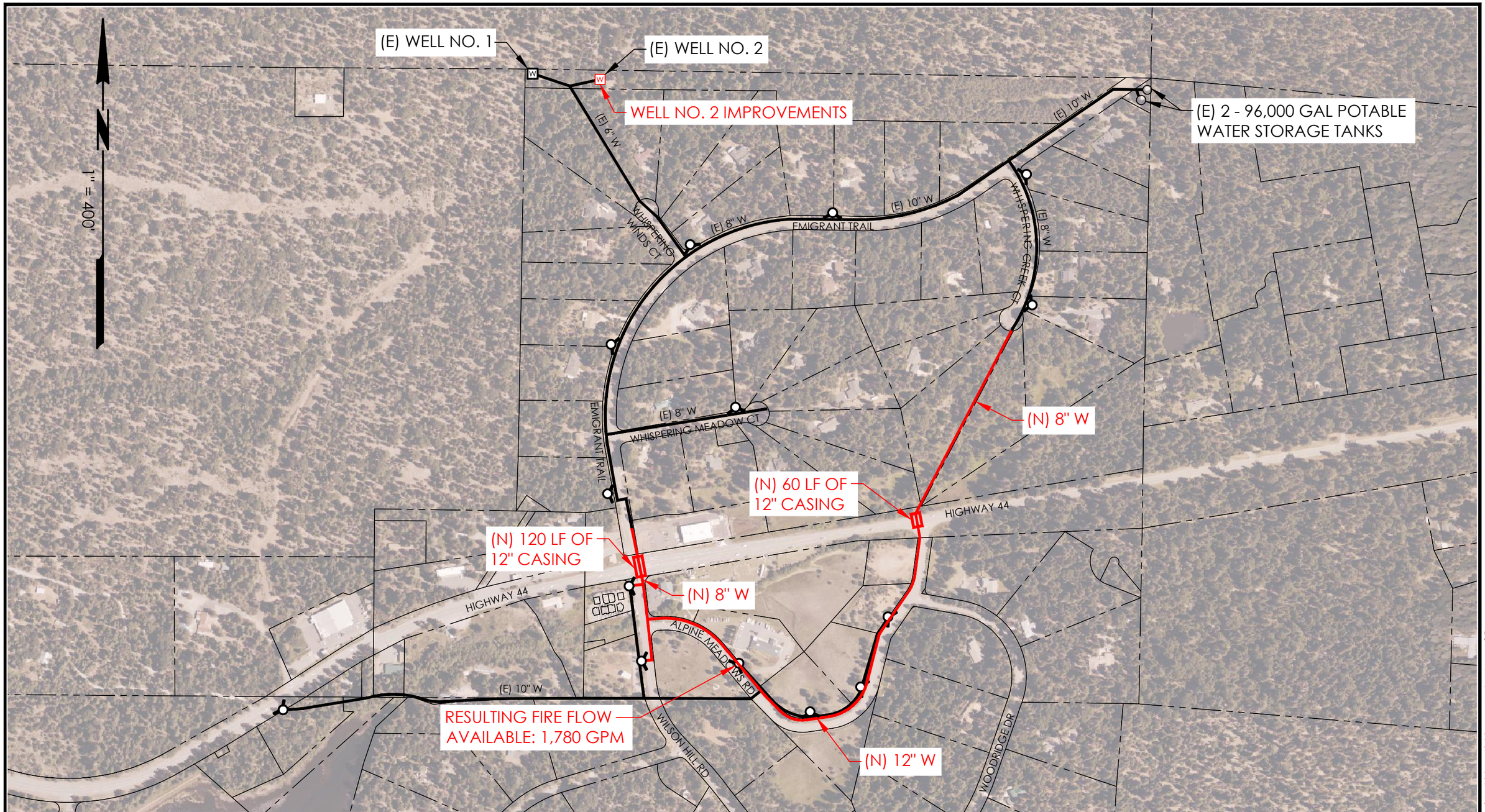


PACE ENGINEERING

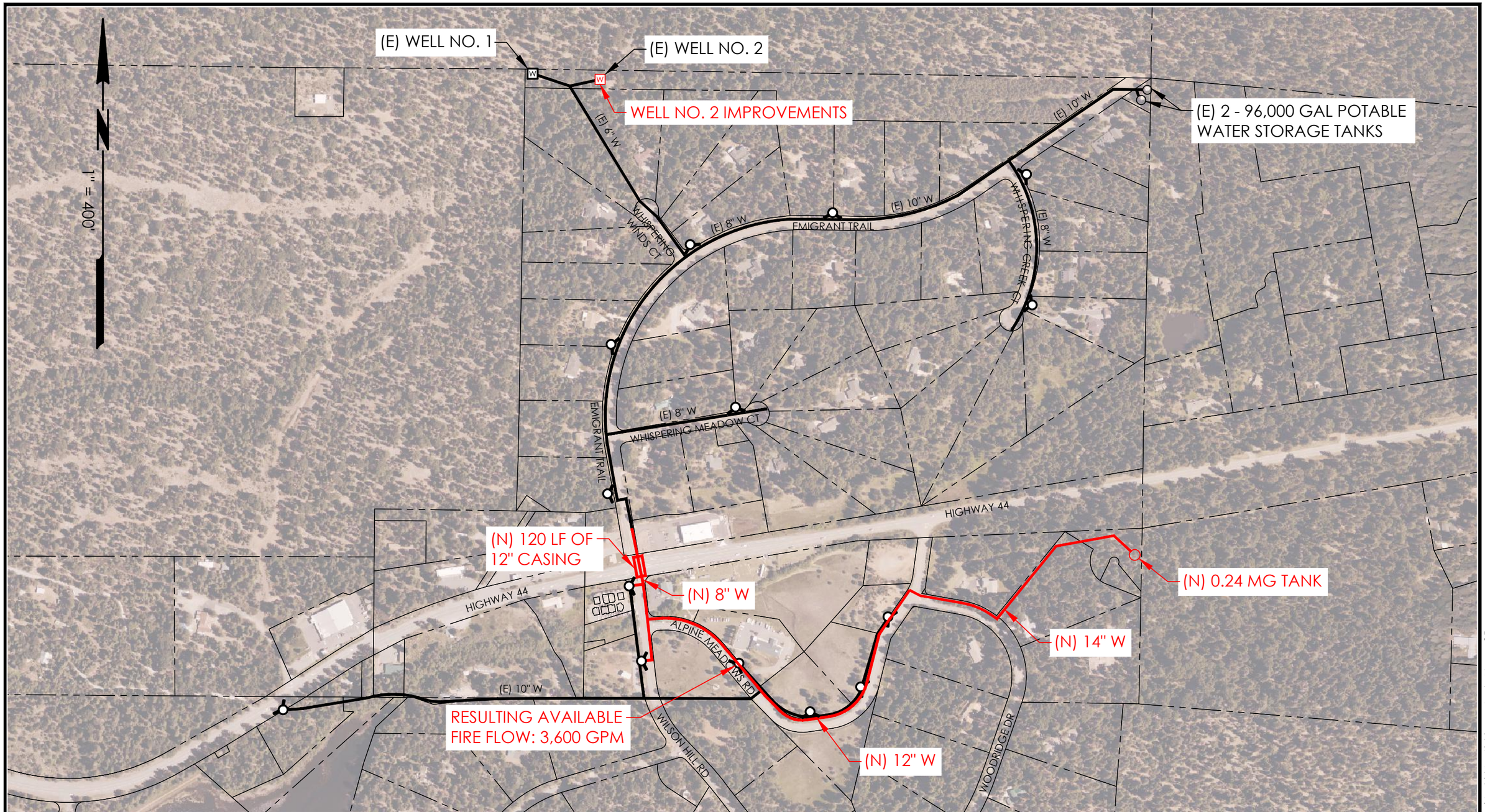
CSA 13 ALPINE MEADOWS
FIRE SUPPRESSION SYSTEM IMPROVEMENT PROJECT
ALTERNATIVE 2

FIGURE 4

DATE: 12/21

JOB # 0199.107

Plot Date: December 01, 2021 - 10:20 am Login Name: CPaget
File Name: M:\Land Projects\0199.107 CSA Alpine Meadows Fire Suppression System\DWG\Water Service Layout.dwg, Layout: ALTERNATIVE 2



PACE ENGINEERING

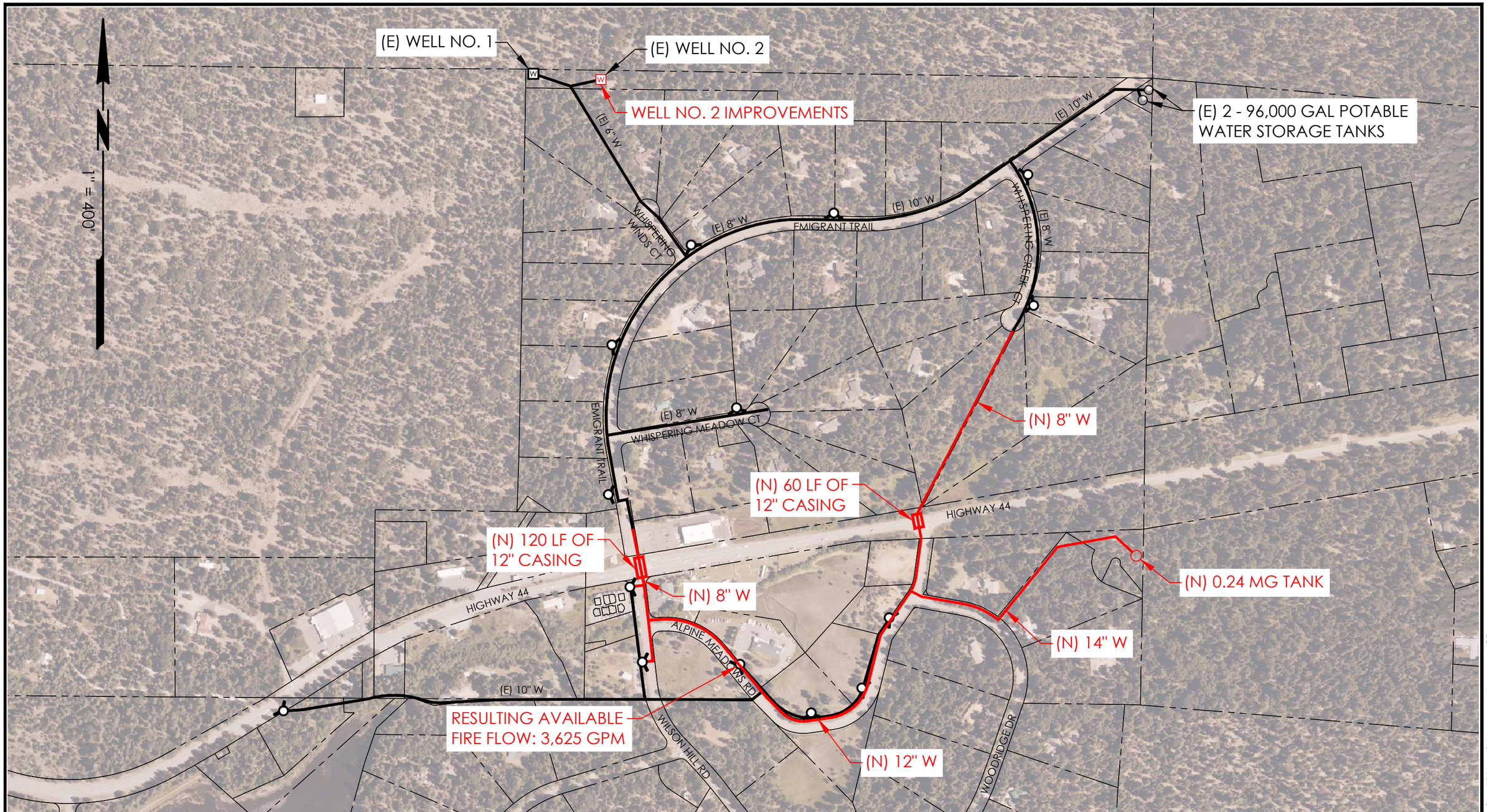
CSA 13 ALPINE MEADOWS
FIRE SUPPRESSION SYSTEM IMPROVEMENT PROJECT
ALTERNATIVE 3

FIGURE 5

DATE: 12/21

JOB # 0199.107

Plot Date: December 01, 2021 - 10:20 am Login Name: CPaget
File Name: M:\Land Projects\0199.107 CSA Alpine Meadows Fire Suppression System\DWG\Water Service Layout.dwg, Layout: ALTERNATIVE 3



PACE ENGINEERING

CSA 13 ALPINE MEADOWS
FIRE SUPPRESSION SYSTEM IMPROVEMENT PROJECT
ALTERNATIVE 4

FIGURE 6

DATE: 12/21

JOB # 0199.107

Plot Date: December 01, 2021 - 10:21 am Login Name: CPaget
File Name: M:\Land Projects\0199.107 CSA Alpine Meadows Fire Suppression System\DWG\Water Service Layout.dwg, Layout: ALTERNATIVE 4

APPENDICES

APPENDIX A

2017 RATE ORDINANCES

ORDINANCE NO. 716

AN ORDINANCE OF THE BOARD OF SUPERVISORS OF THE COUNTY OF SHASTA, COUNTY SERVICE AREA NO. 13-ALPINE MEADOWS, REPEALING ORDINANCE NO. 687 AND SETTING FORTH THE CHARGES, RATES, AND FEES FOR WATER, SEWER, AND RELATED SERVICES

WHEREAS, on April 19, 2017, a written notice describing the proposed rates, fees, and charges to be imposed for water and related services was mailed to the affected property owners in accordance with the provisions of Cal. Const., art. XIII D, section 6; and

WHEREAS, on June 6, 2017, a public hearing was held to provide an opportunity to protest the proposed rates, fees, and charges to be imposed for water and related services in accordance with Cal. Const., art XIII D, section 6; and

WHEREAS, there was not a majority protest to the proposed rates, fees, and charges to be imposed for water and related services.

The Board of Supervisors of the County of Shasta ordains as follows:

Section 1. The rates, fees, and charges to be imposed for water and sewer related services in County Service Area No. 13-Alpine Meadows shall be as follows:

Basic Bi-monthly In-Service Area Rate Schedule Effective September 1, 2017:

(1) A basic bi-monthly charge of $44.90 for the first 10,000 gallons of water, for all metered services.

(2) A charge of $1.35 for every 1,000 gallons or portion thereof for any water used beyond the first 10,000 gallons.

(3) A bi-monthly charge of $111.55 for sewer service per Household Equivalent (HE).

Basic Bi-monthly In-Service Area Rate Schedule Effective September 1, 2018:

(1) A basic bi-monthly charge of $52.80 for the first 10,000 gallons of water, for all metered services.

(2) A charge of $2.15 for every 1,000 gallons or portion thereof for any water used beyond the first 10,000 gallons.

(3) A bi-monthly charge of $113.60 for sewer service per Household Equivalent (HE).

Basic Bi-monthly In-Service Area Rate Schedule Effective September 1, 2019:

(1) A basic bi-monthly charge of $60.75 for the first 10,000 gallons of water, for all metered services.

(2) A charge of $2.15 for every 1,000 gallons or portion thereof for any water used beyond the first 10,000 gallons.

(3) A bi-monthly charge of $115.65 for sewer service per Household Equivalent (HE).

Basic Bi-monthly In-Service Area Rate Schedule Effective September 1, 2020:

(1) A basic bi-monthly charge of $66.75 for the first 10,000 gallons of water, for all metered services.

(2) A charge of $2.15 for every 1,000 gallons or portion thereof for any water used beyond the first 10,000 gallons.

(3) A bi-monthly charge of $117.75 for sewer service per Household Equivalent (HE).

Section 2. Other Charges

(1) Not Connected to Water System: A standby charge of $10.00 per month shall be paid by the owner of each parcel in the Service Area for which delivery of water service is readily available but for which delivery of water service has not been initiated, whether structures are present on the parcel or not. Parcels that are determined not to be suitable for residential or commercial development shall not be charged a standby charge. The determination that a parcel is not suitable for residential or commercial development will be made by the Director of Public Works in his/her sole discretion. That determination shall take into consideration the size, topography, and shape of the parcel, as well as other factors deemed relevant to the determination.

(2) Not Connected to Sewer System: A standby charge of $10.00 per month shall be paid by the owner of each parcel in the Service Area for which sewer service is readily available but for which delivery of sewer service has not been initiated, whether structures are present on the parcel or not.

Parcels that are determined not to be suitable for residential or commercial development shall not be charged a standby charge. The determination that a parcel is not suitable for residential or commercial development will be made by the Public Works Director in his/her sole discretion. That determination shall take into consideration the size, topography, and shape of the parcel, as well as other factors deemed relevant to the determination.

(3) Vacation Status: Pursuant to subdivision A. of section 13.12.040 of the Shasta County Code, customers with a water meter shall be charged the Standby Charge of $10.00 per month during the months the parcel is vacant, upon request, if the parcel is to receive regular water service for less than three consecutive months per year. In addition, customers shall be charged the Turn-On Fee as set below.

(4) Capacity Charge: Should a meter of a size greater than ¾ inch be required by Local Fire Safety Standards or other codified regulations, the standby charge and basic bi-monthly water charge shall be increased proportionally to the increased area of the meter.

Restoration to Service (Disconnected Service):

(1) The fee to restore service that has been discontinued due to non-payment of water service charges and fees shall be the actual cost to restore service with a minimum charge of $65.00. If the customer requests that water service be restored outside of regular business hours, a service charge equal to the costs incurred may be charged.

(2) The fee to cover the costs of administering the termination and subsequent restoration of service due to Vacation Status shall be $65.00. Water service will be restored to regular status upon request from the customer and will be turned on no later than the next business day. If the customer requests that water service be restored outside of regular business hours, a service charge equal to the costs incurred may be charged.

Charges for Water Delivery to Users Not in County Service Area No. 13 (Short-Term Usage):

When available, water may be made available to parcels which are not within County Service Area No. 13 at twice the rate charged to regular customers for the same usage in a bi-monthly period.

In addition, a refundable fee of $500.00 shall be charged for installation of a fire hydrant meter to record water usage, and a written services agreement setting

forth the terms and conditions of the delivery of water must be executed before water may be delivered.

Sewer Connection Inspection Fee:

$300.00 for sewer lateral connection to sewer main paid at building permit issuance.

Installation, Extension and Connection Fees:

(1) When main line extensions are not required, County Service Area personnel will install the meter based on the following fees to be paid prior to installation:

¾ inch Water Meter	$ 750.00 Deposit, plus actual costs
Other Meter Sizes	$ 1,500.00 Deposit, plus actual costs
Road Crossing	$ 2,500.00 Deposit, plus actual costs

(2) When main line extensions are required, meter installation and extension of service shall be constructed at the sole expense of the person or entity applying for the extension, and shall meet or exceed minimum standards and requirements of the County. A deposit to cover the improvement plan check and construction inspection will be required. The minimum deposit shall be $500.00. Once the actual costs of plan checking and construction inspection are determined, a fee to cover those costs shall be imposed and the deposit shall be applied to the fee.

Charges for Other Services in County Service Area No. 13:

For services such as flow testing for proposed development or improvements, or other services not considered herein which are not a part of the day-to-day operation, a deposit to cover the cost of the work will be required. The minimum deposit shall be $500.00. Once the actual costs of the work is determined, a fee to cover those costs shall be imposed and the deposit shall be applied to the fee.

Section 3. For the purposes of this Ordinance, the term "bi-monthly" shall mean occurring once every two months.

Section 4. Effective September 1, 2017, this Ordinance supersedes any prior ordinance or resolution setting water and sewer rates, fees, and charges for County Service Area No. 13-Alpine Meadows.

Section 5. Effective September 1, 2017, Ordinance No. 687 is repealed.

Section 6. This Ordinance shall be in full force and effect from and after 30 days after its passage. The Clerk of the Board shall cause this ordinance to be published as required by law.

DULY PASSED AND ADOPTED this 6th day of June, 2017 by the Board of Supervisors of the County of Shasta, by the following vote:

AYES: Supervisors Moty, Kehoe, Rickert, Morgan, and Baugh
NOES:
ABSENT:
ABSTAIN:
RECUSE:

DAVID A. KEHOE, CHAIRMAN
Board of Supervisors
County of Shasta
State of California

ATTEST:
LAWRENCE G. LEES
Clerk of the Board of Supervisors

By _____
Deputy

THIS INSTRUMENT IS
A CORRECT COPY OF THE ORIGINAL
ON FILE IN THIS OFFICE

ATTEST JUN 06 2017

CLERK OF THE BOARD
Supervisors of the County of Shasta, State of California
By: _____

ORDINANCE NO. 726

AN ORDINANCE OF THE BOARD OF SUPERVISORS OF THE COUNTY OF SHASTA COUNTY SERVICE AREA NO. 13–ALPINE MEADOWS WATER AND SEWER SETTING FORTH CHARGES AND FEES FOR VARIOUS SERVICES

The Board of Supervisors of the County of Shasta ordains as follows:

WHEREAS, on July 13, 2017 and July 19, 2017, notice describing the proposed fees and charges for services was published in the Redding Record Searchlight, a newspaper of general publication in the County of Shasta, as provided in California Government Code Section 66018; and

WHEREAS, providing water requires various services to measure water provided, prevent cross-contamination, manage accounts and provide customer service; and

WHEREAS, the cost of providing these services should be borne proportionately by the customer receiving the service; and

WHEREAS, on July 25, 2017, a public hearing was held regarding the proposed fees and charges to be imposed for services provided customers in County Service Area No. 13-Alpine Meadows Water and Sewer.

The Board of Supervisors of the County of Shasta ordains as follows:

SECTION 1. Fees Schedule for County Service Area No. 13–Alpine Meadows Water and Sewer

Installation: Water meter and main line extensions shall be at the sole expense of the person or entity applying.

(1) When a main line extension is not required, County personnel will install the meter on an existing service pipe in an existing box based on the following fees to be paid prior to installation:

a. 3/4 Inch Water Meter $210.00

b. Other Meter Sizes $300.00
Deposit, plus actual costs including personnel and materials.

(2) When a service line and box must be installed on an existing main, County personnel will install the meter based on the following fee to be paid prior to installation: $3,400.00 deposit, plus actual costs including personnel and materials.

(3) When main line extensions are required, extension of service shall be constructed at the sole expense of the person or entity applying for the extension, and shall meet or exceed minimum standards and requirements of the County. A deposit to cover the improvement plan check and construction inspection will be required. The minimum deposit shall be $1,500. Once the actual costs, including personnel and materials, of plan checking and construction inspection are determined, a fee to cover those costs shall be imposed and the deposit shall be applied to the fee.

Backflow Prevention Device Testing: A $61.00 service charge shall be imposed for backflow prevention device testing or inspection performed by the County for compliance with Shasta County Code Section 13.20, Cross-Connection Control.

Late Fee-Water: Payment of bi-monthly invoices for water service, fees and charges are due 20 calendar days after the invoice is mailed.

(1) 20-Day Reminder: If an invoice for water service fees or charges is unpaid after twenty calendar days following mailing of the invoice, a "20-day reminder" notice shall be issued and mailed. A $25.00 late fee shall be imposed for any invoice unpaid after twenty calendar days following mailing of the invoice.

(2) Shutoff: If an invoice for water service fees or charges including any late fees is unpaid after ten calendar days following mailing of the "20-day reminder," a further $25.00 late fee shall be levied against the account, County Service Area personnel will shut off water service if payment in full is not received.

(3) Restoration of Service:

a. If restoration of water service can be performed during the regularly scheduled trip by staff in the regular course of business, a $75.00 fee shall be imposed. Service will be restored no later than the next business day.

b. If the customer requires restoration of water service which requires and otherwise unscheduled trip to restore water service, a $260.00 fee shall be imposed.

Late Fee-Sewer: Bi-monthly invoices for sewer service, fees and charges are due twenty calendar days after the invoice is mailed.

(1) 20-Day Reminder: Bills are due and payable within twenty days after the billing date. In addition to service charges, a fee of 1.5 percent may be

charged if the bill is not paid within 59 calendar days after the billing date. A notice will be sent twenty days of the billing date, or as soon is as practicable thereafter, by regular mail to a customer before the service is charged. If the customer is a tenant, notice will also be given to the property owner. If payment has not been made before the next billing period, the fee will be charged. The basic monthly or bi-monthly charge and fees shall continue to accrue until charges are paid. Unpaid sewer fees will be collected in accordance with the provisions of Government Code Section 25215.5, as it may be amended from time to time.

Restoration of Service–Vacation: A fee of $40.00 shall be charged for the conversion to vacation status. Water service will be restored to regular status upon request from the customer and will be turned on no later than the next business day. A fee of $40.00 shall be charged for the conversion to vacation status. If the customer requests restoration of service that requires an otherwise unscheduled trip a $220.00 fee shall be imposed.

SECTION 2. This Ordinance supersedes those portions of any prior ordinance or resolutions setting fees for service set forth in this Ordinance in County Service Area No. 13-Alpine Meadows Water and Sewer.

SECTION 3. This Ordinance shall take effect and be in full force and effect from and after 30 days after its passage. The Clerk of the Board shall cause this Ordinance to be published as required by law.

DULY PASSED AND ADOPTED this 15th day of August, 2017 by the Board of Supervisors of the County of Shasta by the following vote:

AYES: Supervisors Rickert, Morgan, Baugh, Kehoe, and Moty
NOES: None
ABSENT: None
ABSTAIN: None
RECUSE: None

DAVID A. KEHOE, CHAIRMAN
Board of Supervisors
County of Shasta
State of California

ATTEST:

LAWRENCE G. LEES
Clerk of the Board of Supervisors

By: _____
Deputy

THIS INSTRUMENT IS A CORRECT COPY
OF THE ORIGINAL ON FILE IN THIS OFFICE

ATTEST AUG 15 2017

CLERK OF THE BOARD
Supervisors of the County of Shasta, State of California
BY: _____

APPENDIX B

SHASTA COUNTY FISCAL YEAR 2020-2021
AUDITED FINANCIALS

COUNTY of SHASTA

ANNUAL COMPREHENSIVE FINANCIAL REPORT

FOR THE YEAR ENDED JUNE 30, **2021**

NOLDA SHORT, AUDITOR-CONTROLLER


COUNTY OF SHASTA
CALIFORNIA

County of Shasta, California

Annual Comprehensive Financial Report

Fiscal Year Ended June 30, 2021

Prepared under the direction of Nolda Short, Auditor-Controller


COUNTY OF SHASTA
CALIFORNIA

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JUNE 30, 2021

FINANCIAL SECTION (CONTINUED) **Page**

STATISTICAL SECTION (Last Ten Fiscal Years Where Applicable):

NONMAJOR ENTERPRISE FUNDS

COUNTY OF SHASTA
COMBINING STATEMENT OF NET POSITION
NONMAJOR ENTERPRISE FUNDS
JUNE 30, 2021

	CSA #2 Sugarloaf Water	CSA #3 Castella Water	CSA #8 Palo Cedro
ASSETS			
Current Assets:			
Cash and Investments	$ -	$ 54,923	$ 66,389
Receivables, Net	9,872	11,950	52,833
Due from Other Governments	-	16,142	-
Other Assets	-	-	-
Due from Other Funds	5,119	2,018	12,986
Total Current Asset	14,991	85,034	132,207
Noncurrent Assets:			
Special Assessments Receivable	-	147,630	-
Cash and Investments Restricted	-	11,934	-
Capital Assets:			
Nondepreciable, Net	460,013	66,008	340,835
Depreciable, Net	222,920	519,469	558,703
Total Noncurrrent Asset	682,933	745,041	899,538
Total Assets	697,924	830,074	1,031,745
LIABILITIES			
Current Liabilities:			
Accounts Payable	3,619	17,088	480
Accrued Interest Payable	-	2,127	-
Due to Other Funds	24,292	-	-
Due to Other Governments	-	-	-
Unearned Revenue	6,666	3,383	7,478
Bonds, Notes Payable	-	3,200	-
Total Current Liabilities	34,577	25,798	7,958
Noncurrent Liabilities:			
Advances from Other Funds	-	-	-
Notes Payable	-	-	-
Bonds Payable	-	151,500	-
Total Noncurrent Liabilities	-	151,500	-
Total Liabilities	34,577	177,298	7,958
NET POSITION			
Net Investment in Capital Assets	682,933	430,776	899,538
Restricted for Debt Services	-	11,934	-
Unrestricted	(19,586)	210,065	124,248
Total Net Position	$ 663,347	$ 652,776	$ 1,023,786

COUNTY OF SHASTA
COMBINING STATEMENT OF NET POSITION
NONMAJOR ENTERPRISE FUNDS
JUNE 30, 2021

	CSA #11 French Gulch	CSA #13 Alpine Meadows	CSA #17 Cotton-wood
ASSETS			
Current Assets:			
Cash and Investments	$ 164,794	$ 6,971	$ -
Receivables, Net	34,418	9,251	217,668
Due from Other Governments	-	-	1,456,314
Other Assets	-	-	-
Due from Other Funds	2,841	2,220	35,228
Total Current Asset	202,053	18,442	1,709,210
Noncurrent Assets:			
Special Assessments Receivable	-	-	-
Cash and Investments Restricted	-	-	237,771
Capital Assets:			
Nondepreciable, Net	45,928	-	6,988,399
Depreciable, Net	523,850	91,915	802,752
Total Noncurrrent Asset	569,778	91,915	8,028,922
Total Assets	771,830	110,357	9,738,132
LIABILITIES			
Current Liabilities:			
Accounts Payable	22	11	238,498
Retention Payable	-	-	237,771
Accrued Interest Payable	-	-	-
Due to Other Funds	-	-	777,733
Due to Other Governments	-	-	-
Deposits from Others	-	-	-
Unearned Revenue	2,107	902	18,444
Bonds, Notes Payable	-	-	-
Total Current Liabilities	2,129	913	1,272,446
Noncurrent Liabilities:			
Advances from Other Funds	-	1,667	-
Notes Payable	-	-	-
Bonds Payable	-	-	-
Total Noncurrent Liabilities	-	1,667	-
Total Liabilities	2,129	2,579	1,272,446
NET POSITION			
Net Investment in Capital Assets	569,778	91,915	7,791,151
Restricted for Debt Services	-	-	237,771
Unrestricted	199,923	15,863	436,764
Total Net Position	$ 769,701	$ 107,778	$ 8,465,685

COUNTY OF SHASTA
COMBINING STATEMENT OF NET POSITION
NONMAJOR ENTERPRISE FUNDS
JUNE 30, 2021

	CSA #23 Cragview Water	Shasta County Transit	Total
ASSETS			
Current Assets:			
Cash and Investments	$ 26,490	$ -	$ 319,566
Receivables, Net	13,080	-	349,072
Due from Other Governments	-	812,312	2,284,769
Other Assets	6,864	-	6,864
Due from Other Funds	2,622	-	63,034
Total Current Asset	49,055	812,312	3,023,304
Noncurrent Assets:			
Special Assessments Receivable	142,337	-	289,967
Cash and Investments Restricted	13,846	-	263,551
Capital Assets:			
Nondepreciable, Net	-	-	7,901,182
Depreciable, Net	1,167,905	-	3,887,513
Total Noncurrrent Asset	1,324,089	-	12,342,214
Total Assets	1,373,144	812,312	15,365,518
LIABILITIES			
Current Liabilities:			
Accounts Payable	326	-	260,044
Retention Payable	-	-	237,771
Accrued Interest Payable	-	-	2,127
Due to Other Funds	-	638,081	1,440,106
Due to Other Governments	-	174,231	174,231
Unearned Revenue	1,572	-	40,553
Bonds, Notes Payable	13,727	-	16,927
Total Current Liabilities	15,625	812,312	2,171,759
Noncurrent Liabilities:			
Advances from Other Funds	-	-	1,667
Notes Payable	164,728	-	164,728
Bonds Payable	-	-	151,500
Total Noncurrent Liabilities	164,728	-	317,894
Total Liabilities	180,353	812,312	2,489,653
NET POSITION			
Net Investment in Capital Assets	989,450	-	11,455,541
Unrestricted	203,341	-	1,420,324
Total Net Position	$ 1,192,791	$ -	$ 12,875,865

COUNTY OF SHASTA
COMBINING STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
NONMAJOR ENTERPRISE FUNDS
YEAR ENDED JUNE 30, 2021

	CSA #2 Sugarloaf Water	CSA #3 Castella Water	CSA #8 Palo Cedro
OPERATING REVENUES			
Charges for Services	$ 62,555	$ 59,925	$ 322,628
Total Operating Revenues	62,555	59,925	322,628
OPERATING EXPENSES			
Services and Supplies	115,229	44,992	331,078
Central Service Costs	7,994	4,334	7,842
Depreciation	10,519	41,199	95,778
Total Operating Expenses	133,742	90,526	434,698
OPERATING INCOME (LOSS)	(71,187)	(30,601)	(112,070)
NON-OPERATING REVENUES (EXPENSES)			
Interest	(1,630)	738	2,185
Property Tax Revenues	-	-	-
Interest Expense	-	(6,403)	-
Total Nonoperating Revenues (Expenses)	(1,630)	(5,665)	2,185
INCOME BEFORE CAPITAL CONTRIBUTIONS, TRANSFERS AND SPECIAL ITEMS	(72,817)	(36,266)	(109,885)
Capital Grants and Contributions	27,168	45,630	-
Special Items - Loss on Disposal of Operations	-	-	-
Transfers In	70,000	-	29,498
Transfers Out	-	-	(645)
CHANGE IN NET POSITION	24,351	9,365	(81,032)
Net Position - Beginning	638,996	643,411	1,104,818
NET POSITION - ENDING	$ 663,347	$ 652,776	$ 1,023,786

COUNTY OF SHASTA
COMBINING STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
NONMAJOR ENTERPRISE FUNDS
YEAR ENDED JUNE 30, 2021

	CSA #11 French Gulch	CSA #13 Alpine Meadows	CSA #17 Cotton-wood
OPERATING REVENUES			
Charges for Services	$ 98,275	$ 50,778	$ 1,049,721
Total Operating Revenues	98,275	50,778	1,049,721
OPERATING EXPENSES			
Services and Supplies	60,188	48,291	690,628
Central Service Costs	4,849	3,069	26,270
Depreciation	43,056	7,070	240,599
Total Operating Expenses	108,093	58,430	957,498
OPERATING INCOME (LOSS)	(9,818)	(7,652)	92,223
NONOPERATING REVENUES (EXPENSES)			
Interest	1,817	93	(6,284)
Property Tax Revenues	-	-	-
Nonoperating Grants	-	-	27,758
Other Expense	-	-	(175,760)
Total Nonoperating Revenues (Expenses)	1,817	93	(154,286)
INCOME BEFORE CAPITAL CONTRIBUTIONS, TRANSFERS AND SPECIAL ITEMS	(8,001)	(7,560)	(62,063)
Capital Grants and Contributions	-	-	3,959,745
Transfers In	-	10,000	-
Transfers Out	-	-	(1,656)
CHANGE IN NET POSITION	(8,001)	2,440	3,896,026
Net Position - Beginning	777,702	105,337	4,569,659
NET POSITION - ENDING	$ 769,701	$ 107,778	$ 8,465,685

COUNTY OF SHASTA
COMBINING STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
NONMAJOR ENTERPRISE FUNDS
YEAR ENDED JUNE 30, 2021

	CSA #23 Craigview Water	Shasta County Transit	Total
OPERATING REVENUES			
Charges for Services	$ 69,576	$ 11,682	$ 1,725,139
Total Operating Revenues	69,576	11,682	1,725,139
OPERATING EXPENSES			
Services and Supplies	45,274	697,053	2,032,732
Central Service Costs	4,669	3,845	62,872
Depreciation	30,976	-	469,199
Total Operating Expenses	80,919	700,898	2,564,803
OPERATING INCOME (LOSS)	(11,343)	(689,216)	(839,663)
NON-OPERATING REVENUES (EXPENSES)			
Interest	326	(3,732)	(6,488)
Property Tax Revenues	6,610	-	6,610
Nonoperating Grants	-	692,948	720,706
Other Revenue	83	-	83
Other Expense	-	-	(175,760)
Interest Expense	-	-	(6,403)
Total Nonoperating Revenues (Expenses)	7,019	689,216	538,749
INCOME BEFORE CAPITAL CONTRIBUTIONS, TRANSFERS AND SPECIAL ITEMS	(4,324)	-	(300,915)
Capital Grants and Contributions	-	-	4,032,543
Transfers In	-	-	109,498
Transfers Out	-	-	(2,301)
CHANGE IN NET POSITION	(4,324)	-	3,838,826
Net Position - Beginning	1,197,115	-	9,037,039
NET POSITION - ENDING	$ 1,192,791	$ -	$ 12,875,865

COUNTY OF SHASTA
COMBINING STATEMENT OF CASH FLOWS
NONMAJOR ENTERPRISE FUNDS
YEAR ENDED JUNE 30, 2021

	CSA #2 Sugarloaf Water	CSA #3 Castella Water	CSA #8 Palo Cedro
CASH FLOWS FROM OPERATING ACTIVITIES			
Receipts from Customers	$ 60,927	$ 61,326	$ 303,625
Payments to Suppliers	(246,744)	(38,622)	(365,365)
Operating Subsidies and Transfers	-	-	29,498
Other Receipts	-	-	-
Other Payments	-	-	-
Net Cash Provided (Used) by Operating Activities	(185,818)	22,703	(32,242)
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES			
Property Taxes	-	-	-
Operating Grants	-	-	-
Nonoperating Subsidies and Transfers In	-	-	-
Nonoperating Subsidies and Transfers Out	117,852	(16,142)	-
Net Cash Provided (Used) by Noncapital Financing Activities	117,852	(16,142)	-
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES			
Acquisition and Construction of Capital Assets	(27,573)	(46,148)	(645)
Transfers for Capital Acquisition	70,000	-	-
Principal Payments on Capital Debt	-	(3,100)	-
Special Assessments	-	1,082	-
Capital Grants Received	27,168	45,630	-
Interest Payments on Capital Debt	-	(6,446)	-
Net Cash (Used) by Capital and Related Financing Activities	69,594	(8,981)	(645)
CASH FLOWS FROM INVESTING ACTIVITIES			
Interest on Investments	(1,629)	738	2,185
Net Cash Provided (Used) by Investing Activities	(1,629)	738	2,185
NET INCREASE (DECREASE) IN CASH	-	(1,682)	(30,702)
Cash and Cash Equivalents - Beginning of Year*	-	68,539	97,092
CASH AND CASH EQUIVALENTS - END OF YEAR*	$ -	$ 66,857	$ 66,389

*** Includes Restricted Cash and Imprest Cash**

COUNTY OF SHASTA
COMBINING STATEMENT OF CASH FLOWS
NONMAJOR ENTERPRISE FUNDS
YEAR ENDED JUNE 30, 2021

	CSA #11 French Gulch	CSA #13 Alpine Meadows	CSA #17 Cotton-wood
CASH FLOWS FROM OPERATING ACTIVITIES			
Receipts from Customers	$ 80,669	$ 47,367	$ 1,009,047
Payments to Suppliers	(75,114)	(58,885)	(819,369)
Operating Subsidies and Transfers	-	-	-
Other Receipts	-	-	-
Other Payments	-	-	-
Net Cash Provided (Used) by Operating Activities	5,554	(11,518)	189,678
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES			
Property Taxes	-	-	-
Operating Grants	-	-	-
Nonoperating Subsidies and Transfers In	-	10,000	-
Nonoperating Subsidies and Transfers Out	-	(1,667)	(175,760)
Net Cash Provided (Used) by Noncapital Financing Activities	-	8,333	(175,760)
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES			
Acquisition and Construction of Capital Assets	-	-	(4,036,374)
Transfers for Capital Acquisition	-	-	-
Principal Payments on Capital Debt	-	-	-
Special Assessments	-	-	-
Capital Grants Received	-	-	4,210,423
Interest Payments on Capital Debt	-	-	-
Net Cash (Used) by Capital and Related Financing Activities	-	-	174,049
CASH FLOWS FROM INVESTING ACTIVITIES			
Interest on Investments	1,817	93	(6,284)
Net Cash Provided (Used) by Investing Activities	1,817	93	(6,284)
NET INCREASE (DECREASE) IN CASH	7,371	(3,092)	181,684
Cash and Cash Equivalents - Beginning of Year*	157,423	10,062	56,087
CASH AND CASH EQUIVALENTS - END OF YEAR*	$ 164,794	$ 6,971	$ 237,771

*** Includes Restricted Cash and Imprest Cash**

COUNTY OF SHASTA
COMBINING STATEMENT OF CASH FLOWS
NONMAJOR ENTERPRISE FUNDS
YEAR ENDED JUNE 30, 2021

	CSA #23 Cragiview Water	Shasta County Transit	Other Enterprise Funds Total
CASH FLOWS FROM OPERATING ACTIVITIES			
Receipts from Customers	$ 66,932	$ 11,682	$ 1,641,574
Payments to Suppliers	(56,113)	(662,628)	(2,322,840)
Operating Subsidies and Transfers	(6,467)	-	23,031
Other Receipts	83	-	83
Net Cash Provided (Used) by Operating Activities	4,436	(650,946)	(658,152)
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES			
Property Taxes	6,610	-	6,610
Operating Grants	-	396,743	396,743
Nonoperating Subsidies and Transfers In	-	257,935	267,935
Nonoperating Subsidies and Transfers Out	-	-	(75,717)
Net Cash Provided (Used) by Noncapital Financing Activities	6,610	654,678	595,571
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES			
Acquisition and Construction of Capital Assets	-	-	(4,110,740)
Transfers for Capital Acquisition	-	-	70,000
Principal Payments on Capital Debt	(20,591)	-	(23,691)
Special Assessments	13,727	-	14,809
Capital Grants Received	-	-	4,283,221
Interest Payments on Capital Debt	-	-	(6,446)
Net Cash (Used) by Capital and Related Financing Activities	(6,864)	-	227,154
CASH FLOWS FROM INVESTING ACTIVITIES			
Interest on Investments	326	(3,732)	(6,487)
Net Cash Provided (Used) by Investing Activities	326	(3,732)	(6,487)
NET INCREASE (DECREASE) IN CASH	4,508	-	158,086
Cash and Cash Equivalents - Beginning of Year*	35,828	-	425,033
CASH AND CASH EQUIVALENTS - END OF YEAR*	$ 40,336	$ -	$ 583,118

*** Includes Restricted Cash and Imprest Cash**

COUNTY OF SHASTA
COMBINING STATEMENT OF CASH FLOWS
NONMAJOR ENTERPRISE FUNDS
YEAR ENDED JUNE 30, 2021

	CSA #2 Sugarloaf Water	CSA #3 Castella Water	CSA #8 Palo Cedro
RECONCILIATION OF OPERATING INCOME (LOSS) TO NET CASH PROVIDED (USED) BY OPERATING ACTIVITIES			
Operating Income (Loss)	$ (71,187)	$ (30,601)	$ (112,070)
Adjustments to Reconcile Net Operating Income (Loss) to Net Cash Provided (Used) by Operating Activities:			
Operating Activities:			
Other Nonoperating Receipts	-	-	-
Other Nonoperating Payments	-	-	-
Depreciation Expense	10,519	41,199	95,778
Operating Transfers	-	-	29,498
Change in Assets and Liabilities:			
Receivables, Net	861	1,695	(8,323)
Due from Other Funds	(5,119)	-	(12,920)
Due from Other Governments	-	-	-
Accounts and Other Payables	(11,360)	16,463	197
Due to Other Funds	(112,161)	(5,759)	(26,642)
Unearned Revenue	2,629	(294)	2,239
Deposits from Others	-	-	-
Due to Other Governments	-	-	-
Net Cash Provided (Used) by Operating Activities	$ (185,818)	$ 22,703	$ (32,242)

*** Includes Restricted Cash and Imprest Cash**

COUNTY OF SHASTA
COMBINING STATEMENT OF CASH FLOWS
NONMAJOR ENTERPRISE FUNDS
YEAR ENDED JUNE 30, 2021

	CSA #11 French Gulch	CSA #13 Alpine Meadows	CSA #17 Cotton-wood
RECONCILIATION OF OPERATING INCOME (LOSS) TO NET CASH PROVIDED (USED) BY OPERATING ACTIVITIES			
Operating Income (Loss)	$ (9,818)	$ (7,652)	$ 92,223
Adjustments to Reconcile Net Operating Income (Loss) to Net Cash Provided (Used) by Operating Activities:			
Operating Activities:			
Other Nonoperating Receipts	-	-	-
Depreciation Expense	43,056	7,070	240,599
Operating Transfers	-	-	-
Change in Assets and Liabilities:			
Receivables, Net	(15,510)	(534)	(9,877)
Due from Other Funds	(2,841)	(2,220)	(35,228)
Due from Other Governments	-	-	-
Accounts and Other Payables	(75)	(244)	(60,566)
Due to Other Funds	(10,003)	(7,281)	(41,904)
Unearned Revenue	745	(157)	4,431
Deposits from Others	-	(500)	-
Due to Other Governments	-	-	-
Net Cash Provided (Used) by Operating Activities	$ 5,554	$ (11,518)	$ 189,678

*** Includes Restricted Cash and Imprest Cash**

COUNTY OF SHASTA
COMBINING STATEMENT OF CASH FLOWS
NONMAJOR ENTERPRISE FUNDS
YEAR ENDED JUNE 30, 2021

	CSA #23 Cragiview Water	Shasta County Transit	Enterprise Funds Total
RECONCILIATION OF OPERATING INCOME (LOSS) TO NET CASH PROVIDED (USED) BY OPERATING ACTIVITIES			
Operating Income (Loss)	$ (11,343)	$ (689,216)	$ (839,663)
Adjustments to Reconcile Net Operating Income (Loss) to Net Cash Provided (Used) by Operating Activities:			
Operating Activities:			
Other Nonoperating Receipts	83	-	83
Depreciation Expense	30,976	-	469,199
Operating Transfers	-	-	29,498
Change in Assets and Liabilities:			
Receivables, Net	(1,212)	-	(32,900)
Due from Other Funds	(2,504)	-	(60,830)
Accounts and Other Payables	109	(453)	(55,930)
Due to Other Funds	(11,278)	-	(215,030)
Unearned Revenue	105	-	9,698
Deposits from Others	(500)	-	(1,000)
Due to Other Governments	-	38,723	38,723
Net Cash Provided (Used) by Operating Activities	$ 4,436	$ (650,946)	$ (658,152)

*** Includes Restricted Cash and Imprest Cash**