

Christian Valley Park Community Services District

Kenneth Loop Planning Study

June 2023

Prepared By:

Hydros Engineering, Inc.

Technical Memorandum

Prepared for: Christian Valley Park CSD

Prepared by: Gerry LaBudde, PE – Hydros Engineering, Inc.

Subject: Kenneth Loop Planning Study

Date: June 29, 2023

Purpose

This memorandum includes an evaluation of alignment alternatives for the Kenneth Loop pipeline within the Christian Valley Park Community Services District (District) service area. The new pipeline will provide several benefits for the water system within the District:

- Increased operational flexibility of the existing distribution system by creating a loop/parallel path for water conveyance throughout the District;
- Availability of treated water service to areas that are currently unserved and have no access to treated water;
- Installation of additional fire hydrants along the pipeline route, and
- Increased hydraulic capacity of the system for domestic service and fire suppression within the District.

Components of the alignment evaluation include:

- Public outreach and meetings with property owners;
- Review of existing easements and rights-of-ways in the project area;
- Environmental constraints analysis to avoid or minimize environmental impacts;
- Engineering and operation/maintenance considerations;
- Recommendation of the preferred alternative for predesign, design and construction in the future;
- Preliminary project cost estimate, and
- Identification of next steps.

This analysis does not include preparation of environmental or permitting documents, acquisition of easements or preparation of contract documents for bidding and construction.

Funding for this study was provided to the District through the Placer County Water Agency's Financial Assistance Program (PCWA – FAP) as part of the County Master Plan Program directed by PCWA.

Conclusions and Recommendations

Conclusions and recommendations from the study are summarized in this section.

Conclusions include:

1. The Kenneth Loop project will increase the reliability of the District's water system, increase hydraulic capacity for fire suppression support and provide availability of treated water to areas of the District that do not have access at this time.
2. The preferred pipeline alternative alignment has been identified based on factors described in this technical memorandum. The alignment consists of 3,800 feet of pipeline, a pressure reducing station, fire hydrants and domestic water services along the alignment.
3. The alignment crosses two privately owned parcels on the cross-country portion of the alignment. The remainder of the alignment will be within the roadway along Kimo Way to Kenneth Way.
4. There is an existing easement located at 3240 Sunshine Meadow Lane suitable for a water pipeline. The District has an existing pipeline adjacent to this parcel constructed as part of the Gayle Loop Project which would be the point of connection on the eastern boundary of the project area.
 - a. A temporary construction easement (TCE) will be necessary during construction activities on the property. The property owners have been cooperative and engaged in the process. They have requested inclusion of some project features in turn for granting the TCE.
5. A new easement will be necessary across the parcel located at 3500 Kimo Way. The owner has been cooperative in allowing access during this study but has not expressed much interest in the project details and location of alternative pipeline alignments on the property. There have been multiple contacts and communications with the owner through the course of this study.
6. There is a multipurpose easement along Kimo Way that may be suitable for a pipeline; if not, easements would be necessary from approximately seven property owners along this portion of the alignment.
7. The Combie Ophir Canal is a prominent feature in the project area. The canal is owned and operated by the Nevada Irrigation District (NID) and the pipeline will cross the canal. NID engineering staff have been helpful and provided input. Key points related to NID's canal include:
 - a. NID will not grant any type of water pipeline easement within their existing canal easement.
 - b. NID will allow the District and its contractors to utilize the canal access road and their easement area during construction so long as there is no risk of damage to their facilities.
 - c. An application/permit to cross the canal will be necessary along with a determination of the crossing configuration (e.g. above or below the canal)
 - d. Construction of the canal crossing will likely be limited to the fall season when the canal is removed from service by NID for maintenance on their system.
8. An environmental constraints analysis conduct to identify environmental resources in an attempt to minimize impacts as part of the planning and design. Biological and cultural resources were the primary concerns that could impact the project and trigger the need for permits or special mitigation measures that would increase the cost of the project.

- a. There were no cultural resources that would impact the project. There were biological resources, primarily wetland areas west of the Combie Ophir Canal. The extent of the wetlands was minimal and the majority of the impacts should be avoidable and will be addressed during detailed design. These areas will likely be regulated at the State level and not through the Corp of Engineers which is more complex.
 - b. The California Environmental Quality Act (CEQA) requirements apply to the project. Prior to construction the CEQA document will be prepared and will likely include an initial study/mitigated negative declaration.
 - c. Acquisition of a permits (e.g. Streambed Alteration) will could potentially be avoided with proper design and construction methods.
9. The Engineer's Estimated for the proposed project is \$1,200,000 and includes design, environmental, construction and construction administration. There is a 20-percent contingency included in the estimated cost.

Recommendations include:

1. Review findings of this study.
2. Develop a funding plan for the project. Future phases of the project will likely be completed as funding becomes available due to the size and cost of the project. A suggested sequence of future phases includes:
 - a. Easement acquisitions
 - b. Topographic survey
 - c. Design and preparation of contract drawings
 - d. CEQA and permitting tasks

Completion of the above tasks will provide the District a 'shovel ready' project that can be implemented when funding becomes available.

3. Securing easements with property owners along the recommended pipeline alignment is an important first step. Easements will require a topo/boundary survey of the area. This pertains to the following parcels:
 - a. 3240 Sunshine Meadows – Temporary Construction Easement
 - b. 3500 Kimo Way – TCE and permanent easement

The remainder of the survey should be along Kimo Way then onto Kenneth Way to the connection point including approximately 10-feet on each side of the road that can be used during design and preparation of contract documents. That portion of the survey should include property corners, known utilities, surface features and other pertinent information that could affect the final design.

Determine if the multipurpose easement currently in place along Kimo Way and Kenneth Way is suitable for a pipeline, if not a new easement will be necessary and would involve seven parcels along the roadways.

4. Identify whether there is an organized road association for Kimo Way and Kenneth Way (Private portion of Kenneth). Involve those property owners in stakeholder communications. Construction will take place along the private road and it is likely the owners in the area will be concerned about the restoration of the road and want to have input.

5. Prepare contract documents for bidding and construction.
 - a. Prepare design documents including drawings and specifications in accordance with rules and regulations pertaining to public work projects in California.
 - b. Coordination with NID on canal crossing and utilization of canal easement during construction for access.
6. Complete the CEQA process and documentation.
 - a. CEQA documents generally have an approximately five-year window once prepared.
 - b. CEQA should be conducted based on the final alignment as defined in this document pending acquisition of easements.
7. Secure project funding for and bid and construct the project.

Background

Background related to the District and the proposed project is included in this section.

District Overview. The District provides treated water service to approximately 650 single family residential homes within the service area. There is one institutional customer, the California State Conservation Corp (CCC). Raw water from the Placer County Water Agency’s Bowman Feeder Canal is treated at the District’s water treatment plant and storage facilities located off Westridge Circle. An overview of the District service area and distribution system is included in Figure 1.

The majority of the system was constructed in the 1960s and most of the growth in the District has been through infill of parcels within the District. The treatment plant has been upgraded to meet growing water demands in the service area and to comply with drinking water regulatory requirements. The majority of the distribution system was constructed with asbestos concrete (AC) pipe. AC pipe was a common material used for pipeline construction in the 1960s and 1970s. Pipelines range in size between 4 to 10-inches in diameter.

Pressure in the distribution system ranges from approximately 40 pounds per square inch (psi) to nearly 200 psi in the lower sections of the system. There are three pressure zones in the system. They include an upper pumped zone near the storage tanks, a zone that runs off unregulated pressure from the tanks and a reduced pressure zone regulated by a pressure reducing station in the system to decrease system pressure in the western half of the system.

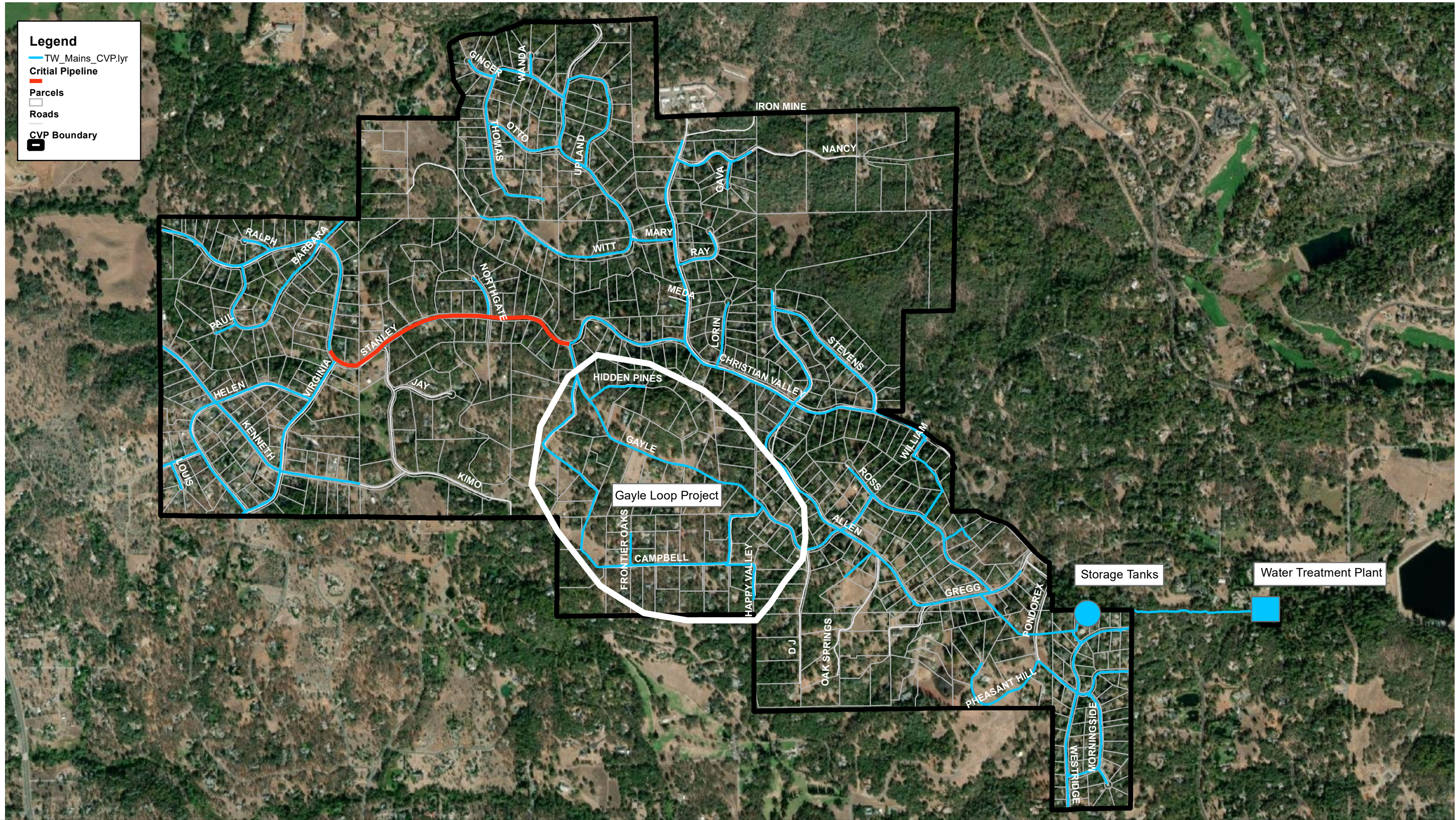
The District has been making progress to increase the reliability of the Distribution system to provide more looping for hydraulic capacity and operational flexibility. The first of these looping projects was the Gayle Loop Project described below and the second is the Kenneth Loop Project, the subject of this study.

Gayle Loop Project. The last major improvement to the distribution system occurred in 2010 and was known as the Gayle Loop Project. That project extended water service to homes in the project area that relied on private groundwater wells for their water supply. Many of the wells in the area had minimal yields without enough output to supply water to homes. The Gayle Loop Project made treated water service from the District available for those interested. The Gayle Loop Project area is shown on Figure 1.

That project provided a number of benefits:

Legend

- TW_Mains_CVP.lyr
- Critical Pipeline
- ▭ Parcels
- ▭ Roads
- ▭ CVP Boundary



NORTH
 1" = 1,500'

COORDINATE SYSTEM:
 CALIFORNIA STATE PLANE, ZONE II,
 NAD83, U.S. SURVEY FEET

SOURCES:
 - HYDROS ENGINEERING
 - PLACER COUNTY GIS DATA

Figure 1 - System Overview



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- Provided treated water availability to unserved parcels desiring to connect;
- Increased the District's customer base;
- Provided a loop in the distribution system to improve system hydraulics and operational flexibility, and
- Added fire hydrants to the system for additional fire suppression capabilities in the area.

The Gayle Loop Project also provided the potential for a second loop that has been envisioned by the District which is the subject of this study.

Stanley Drive Pipeline. The Stanley Drive pipeline is a critical facility for treated water service in the District. Approximately 180 homes on the far western side of the District's service area, nearly one-third of the District's customers, rely on water that is conveyed through this pipeline. There is no other pipeline or loop that supplies water to this portion of the service area. The Stanley Drive pipeline is a 6-inch diameter AC pipe and subject to the highest pressures in the District, nearly 200 psi in some spots and is shown in red on Figure 1. The pipeline runs along Stanley Drive, which is a Placer County road and a main thoroughfare for traffic within the District.

This section of pipeline is considered critical and challenging to repair for several reasons:

- No alternative conveyance path or loop to route water around repair area resulting in major outages during repairs;
- High pressure pipeline – upwards of 200 psi prior to the pressure regulating station;
- The pipe is constructed with asbestos concrete which can have catastrophic failure modes;
- Highly traveled County maintained roadway requiring traffic control and encumbering repair efforts, and
- Placer County owns and maintains a pressurized sewer pipeline along Stanley Drive, parallel to the water main which must be protected during work.

The addition of the Kenneth Loop Pipeline would provide a parallel route for system operators to bypass water around problem areas along Stanley Drive in the event of a leak or other maintenance on that section of pipeline. The ability to route water through a parallel pipeline to the western portion of the District's service area would provide redundancy and limit the number of homes impacted in the event of a failure on the Stanley pipeline.

Kenneth Loop Pipeline. The Kenneth Loop Pipeline has been envisioned as an improvement to the Distribution system to provide redundancy for the western portion of the service area. The pipeline would be approximately 3,000 to 4,000 feet in length and connect with an existing pipeline within the Gayle Loop area off Sunshine Meadow Lane to an existing pipeline on Kenneth Way.

The remainder of this memorandum includes the process for identifying and selecting the preferred pipeline route, operational/engineering and environmental/permitting constraints.

Study Area

There is a limited number of potential pipeline routes between the existing pipe installed as part of the Gayle Loop Project and the existing pipeline that terminates on Kenneth Way on the east side of Virginia Drive. Figure 2 includes the original alignments included in the scope of work.

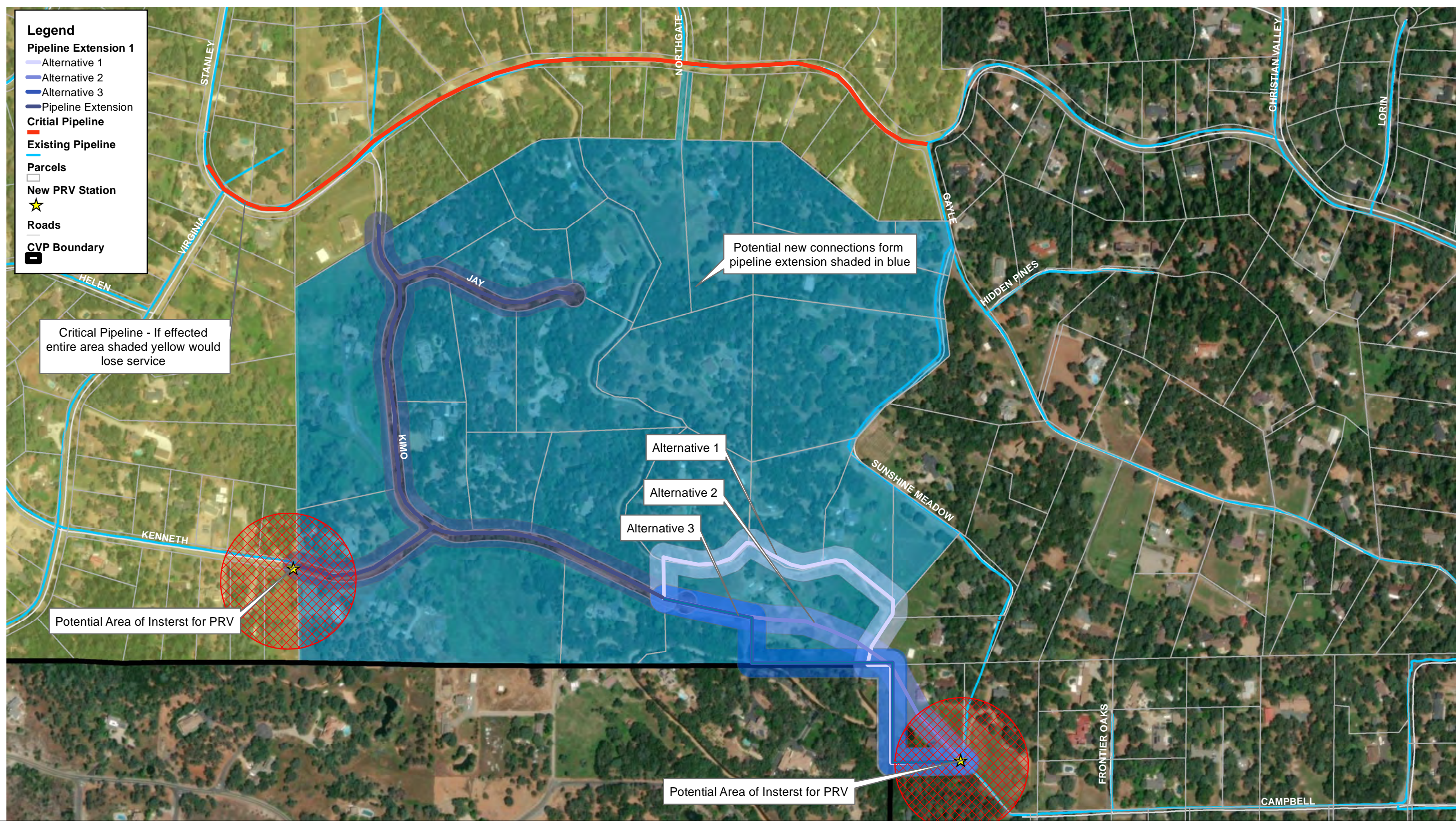


Figure 2 - Original Scope

NORTH
 1" = 500'

COORDINATE SYSTEM:
 CALIFORNIA STATE PLANE, ZONE II,
 NAD83, U.S. SURVEY FEET

SOURCES:
 - HYDROS ENGINEERING
 - PLACER COUNTY GIS DATA

Pipeline alignments shown considered preliminary until completion
 of any easment aquisitions are complete pending futher discussions with property owners.



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Common to all the alternatives is the segment of the alignment that runs along Kimo Way and intersects with Kenneth Way as shown in on Figure 1. There is an existing multipurpose easement over these two roadways that may provide a location for treated water pipelines without the need for an additional easement. This portion of the alignment corresponds with locations for services to provide treated water availability to parcels bordering the roadway that currently do not have access to treated water from the District.

There are eight parcels considered for potential alignments in the study area. They are listed in Table 1 and shown in **Figure 3**.

Table 1
Parcels of Interest for Cross County Routes

Parcel ID	Placer County Assessors Number	Address	Notes
A	076-233-001	2690 Campbell Drive	
B	076-232-053	3240 Sunshine Meadow	
C	076-232-042	3230 Sunshine Meadow	
D1	076-232-046	3200 Sunshine Meadow	Parcel was recently split
D2	076-232-045	XXXX (b) Sunshine Meadow	Parcel was recently split
E	076-140-100 (a)	3180 Sunshine Meadow	Parcel was recently split.
F	076-140-099 (a)	XXXX (b) Sunshine Meadow	Parcel was recently split – no address assigned.
G	076-140-039	3500 Kimo Way	

Notes:

- (a) Parcels were formed from a split late in 2020.
- (b) No address assigned to parcel resulting from split.

Alternative Alignments

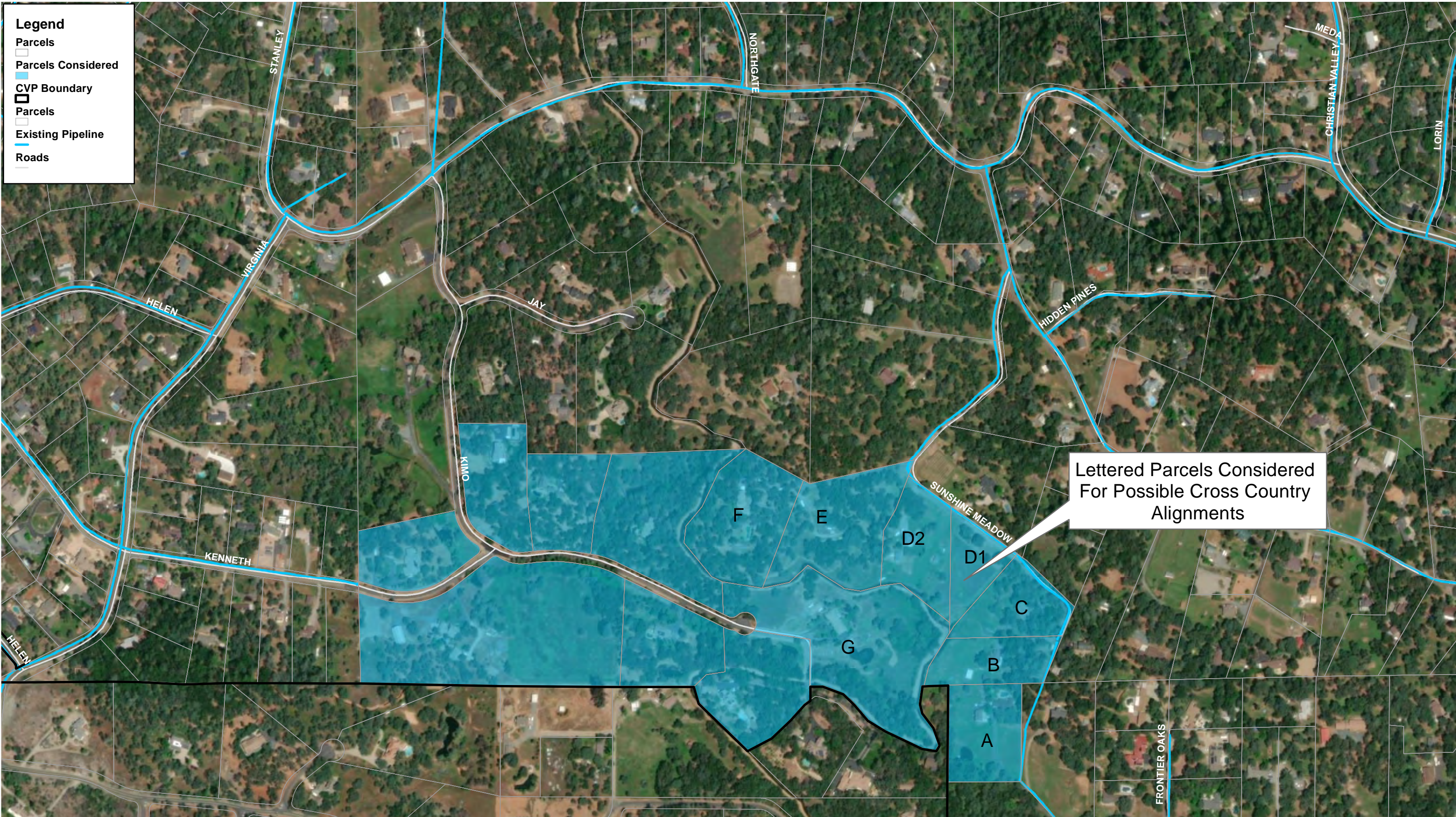
Parcels B and G were the primary candidates for the cross-country portion of the alignment and identified as the Southern Alternative. During the initial evaluation, a second northern route was identified as the Northern Alternative. Kimo Way and portions of Kenneth Way would be utilized for the remainder of the alignment to the point of connection.

Southern Alignment. The alignment would connect with the existing pipeline between Campbell Way and Sunshine Meadows. The pipeline would then cross the Combie Ophir Canal onto Parcel G. The southern alignment and sub-alternatives of Parcel G are shown in **Figure 4**. There are three sub-alternatives on Parcel G.

1. Alt 1 - Parallel to the Combie Ophir Canal, just outside of the NID easement on the southern edge of the property
2. Alt 2 - Bisect parcel approximately midway through the parcel

Legend

- Parcels
- Parcels Considered
- CVP Boundary
- Parcels
- Existing Pipeline
- Roads



Lettered Parcels Considered For Possible Cross Country Alignments

NORTH

1" = 500'

COORDINATE SYSTEM:
CALIFORNIA STATE PLANE, ZONE II,
NAD83, U.S. SURVEY FEET

SOURCES:
- HYDROS ENGINEERING
- PLACER COUNTY GIS DATA

Figure 3 - Study Area

Pipeline alignments shown considered preliminary until completion of any easement aquisitions are complete pending futher discussions with property owners.

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Figure 4 - Southern Alignment

NORTH
 1" = 200'

COORDINATE SYSTEM:
 CALIFORNIA STATE PLANE, ZONE II,
 NAD83, U.S. SURVEY FEET

SOURCES:
 - HYDROS ENGINEERING
 - PLACER COUNTY GIS DATA

Pipeline alignments shown considered preliminary until completion
 of any easement acquisitions are complete pending further discussions with property owners.



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3. Alt 3 - Parallel to the Combie Ophir Canal, just outside of the NID easement on the northern edge of the property

The lengths of these sub-alternatives across Parcel G ranged between 500 and 1,300 feet.

Northern Alignment. This alignment alternative would connect on Sunshine Meadow Lane along a private driveway located north of Parcels E and F as shown on **Figure 5**. Originally Parcels E and F were a single parcel that was divided into two in 2020. The alignment would extend from the point of connection in Sunshine Meadow Lane, run westerly along the existing driveway, then along the newly formed property line running south to Parcel G, then onto Kimo Way. This alignment would be approximately 1,300 feet between Sunshine Meadow and Kimo Way. This alignment was promising and would run along roadways and previously disturbed lands with less potential to have environmental impacts within sensitive areas identified on Parcel G as described in the environmental constraints section of this memo.

Evaluation Criteria

A number of criteria were used to evaluate the alternative alignments:

- Owner's willingness to grant an easement where needed
- Presence of existing easements that could be utilized for the alignment
- Environmental constraints
- Engineering, constructability and operation/maintenance factors

Outreach. Letters were sent out to parcels within the study area. A total of eleven letters were sent in April of 2022. There were only two responses to the letters sent, one of which was negative based on funding requirements. None of the key parcel owners responded to the letter. During March 2023, additional letters were hand delivered to the Parcels B and G.

Southern Alignment. The owner of Parcel B, on the eastern side of the project reached out via phone and there were follow-up site meetings at the property. The owner was home at Parcel G in March 2023, and the possibility of construction of a pipeline on the property for the project was discussed. The owner responded they would consider it and had no objections.

Parcel B – 3240 Sunshine Meadow Lane. Site meetings were conducted on 4/5/2023 and 5/25/2023 with the owners of the parcel. The potential alignment was discussed on the southern side of the property within the existing 20-foot wide easement running in an east/west direction. A number of topics were discussed including addressing questions and concerns expressed by the property owner including:

- Project schedule – which is unknown at this time pending funding
- Types of equipment necessary for the construction of the project were discussed
- Operation and maintenance activities once the pipe was placed into service
- Tree removal that may be necessary
- Status of roadway condition along Sunshine Meadows Lane and potential for damage during construction
- Preservation of existing structures and fences on the property including the shop



- Legend**
- Northern Alignment
 - Connection Points
 - New PRV Station
 - Kenneth Extension
 - Existing Pipeline
 - Roads
 - CVP Boundary

Figure 5 - Northern Alignment

NORTH
 1" = 200'

COORDINATE SYSTEM:
 CALIFORNIA STATE PLANE, ZONE II,
 NAD83, U.S. SURVEY FEET

SOURCES:
 - HYDROS ENGINEERING
 - PLACER COUNTY GIS DATA

Pipeline alignments shown considered preliminary until completion
 of any easement acquisitions are complete pending further discussions with property owners.

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- Avoid damage to existing septic and leach field system – based on site inspection it is far enough off the easement to avoid any problems
- Reestablish drainage ditch along the eastern side of the property (in the existing easement area) to maintain current drainage pathway
- Location of existing well and irrigation pump/facilities and damage prevention
- Restoration of the property after construction

The owners acknowledged the presence of the existing easement and the District's ability to install and operate the pipeline. There will be a need for a temporary construction easement on the property for the initial construction of the pipeline. The owners indicated a willingness to grant a TCE for that purpose and inquired for a few project features in consideration. The features requested seem reasonable based on discussions in the field. Hydros staff was clear in the discussion that the District Board of Directors would need approve the inclusions. The request included:

- Relocation of their water meter box from its current location near the top of their driveway closer to the home along the new pipe alignment. This would be a simple feature to include in the project with a cost of less than \$2,000
- Removal of any trees from the site taken down for construction of the project – cost would be minimal there are just a few trees that would require removal
- Mitigation of dust and preservation of driveway and property by placing gravel during the project construction – cost would be on the order of \$2,500 to \$5,000

This negotiation would take place during preparation of the TCE at a later phase of the project.

Parcel G – 3500 Kimo Way. Contact with the owner has been made via phone and in person a number of times. The owner has been very cooperative in allowing Hydros staff, including the environmental consultants, to access the property. However, the owner has not shown interest in reviewing maps or discussing details about the project. There are three existing easements of interest on this property described in the next section of this technical memo.

Northern Alignment. This alignment alternative consists of Parcels E/F and Parcel G discussed as part of the Southern Alignment above.

Parcels E/F - 3180 Sunshine Meadows. The parcel owner along the Northern Alignment did not respond to the outreach letter. The owner is a local contractor and was contacted via telephone. The owner was initially agreeable to the idea of installing a pipeline that would extend east from Sunshine Meadows Lane, along the private driveway, then south towards the canal along the newly formed property line resulting from the property split completed in 2020. The owner replied a few days after the phone call via email that they were not interested in granting an easement along the newly formed property line. A subsequent follow up via phone confirmed the owner was not interested, for no other reason than 'just not interested'.

This alignment was eliminated from further evaluation because of the owner's unwillingness to consider granting an easement.

Existing Easements

A land surveying company, Giuliani & Kull, Inc., was retained to provide an evaluation of existing easements in the study area, specifically, easements that may be able to be used for the purpose of a pipeline alignment within the study area, or that could hinder the installation of pipeline. The easement evaluation described below is specific to Parcels B and G, as well as Kimo Way over to Kenneth Way. The remaining easements on other parcels did not include any potential alignments that could be used by the District for the project, but are shown on Figure 6.

There are multiple easements on the parcels in the area, but mainly for the use of private utilities that are 'appurtenant' to the parcel(s), meaning that the easement is for utilities that directly benefit the parcel and are not suitable in the manner currently written for a public water line for the District's use.

Noteworthy easements in the study area on parcels considered for possible pipeline alignments are described below and are highlighted on the figure.

Parcel B – 3240 Sunshine Meadow Lane. There are two existing easements of interest on the parcel:

Easement - B1 - There is an existing easement on the southern side of the parcel running in an east/west direction which does allow for use for a water pipeline. The eastern side of this easement coincides with the District's water line at the point of connection. The existing easement is adequate for the proposed pipeline, however a temporary construction easement (TCE) will be necessary and negotiated with the land owner as discussed above.

Easement - B2 - The Nevada Irrigation District (NID) operates the Combie Ophir Canal. Raw water is conveyed via the canal and used for agricultural purposes. The canal borders the parcels of interest included in Table 1 and Figure 6. NID has an easement on both sides of the canal that runs parallel along the entire length of the canal in the project area. The easement is a total of 60 feet wide and is 20 feet on the left side when looking downstream and 40 feet on the right when looking downstream; with the exception of a portion that is 50-feet wide on Parcel G.

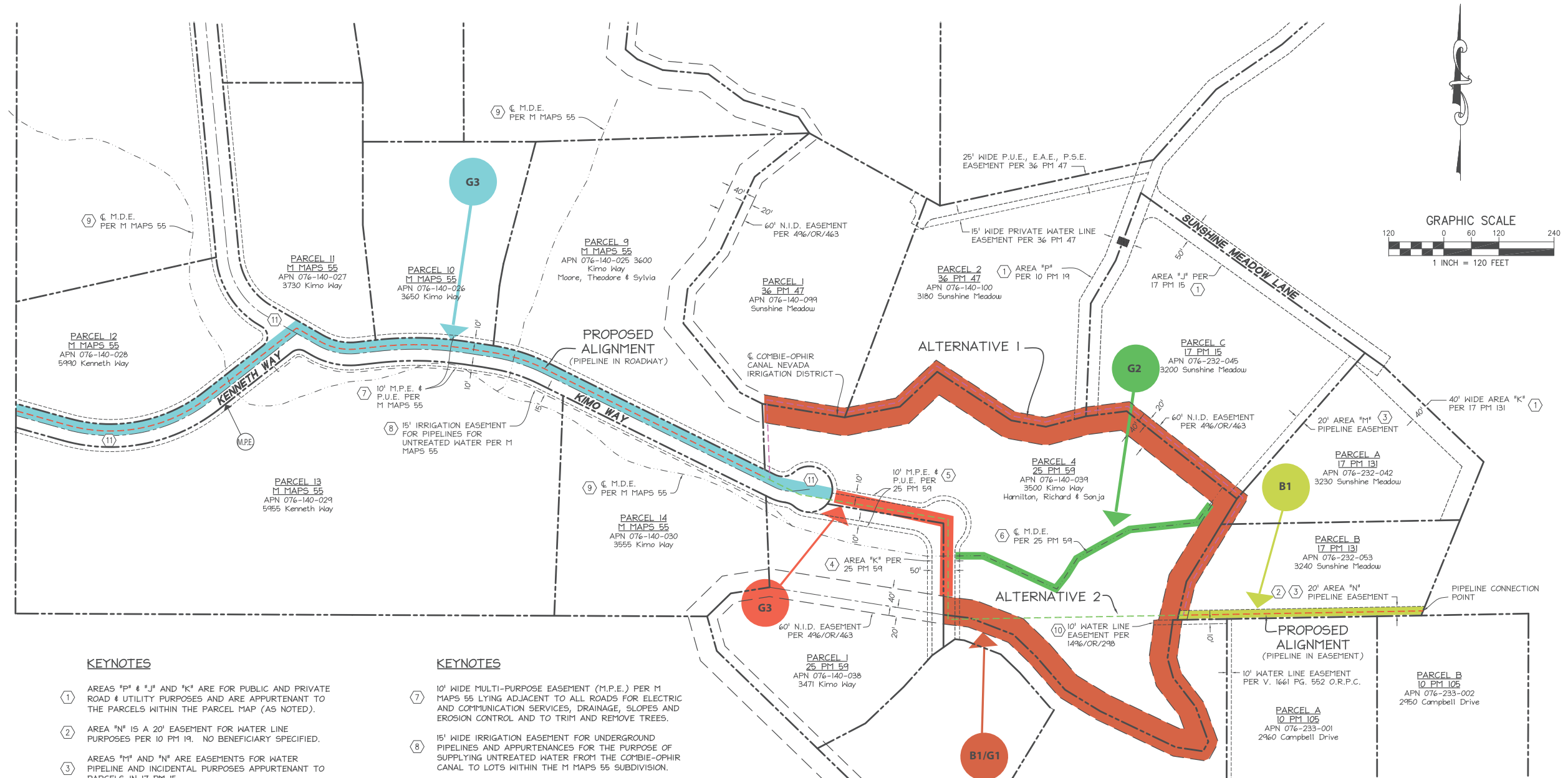
NID was contacted about allowing the District to install the pipeline within the NID easement. NID engineering staff will not agree to allowing use of their existing easement for the purpose of construction and operation of a pipeline. NID staff indicated that they would allow temporary use of their easement during construction and for operation and maintenance activities so long as those activities do not encumber, threaten or damage their existing facilities. Utilization of portions of the NID canal easement would be of benefit during construction and ongoing operations and maintenance.

The NID canal easement encumbers Parcel B on the eastern end of the project. The proposed pipeline would enter the NID easement on a perpendicular crossing. This will require an encroachment permit from NID. There is an application process and NID engineers have indicated this will not be a problem. The canal crossing is discussed in more detail below.

Parcel G – 3500 Kimo Way. There are three existing easements that are of interest on Parcel G. Unlike Parcel B, none of them are written for a public water line; however, they do encumber the placement of the proposed pipeline. Existing easements are summarized below:

CHRISTIAN VALLEY PARK COMMUNITY SERVICE DISTRICT KENNETH PIPELINE EXTENSION

P:\22014-CVPCSD\M2201455 BY(XREFS)



KEYNOTES

- ① AREAS "P" & "J" AND "K" ARE FOR PUBLIC AND PRIVATE ROAD & UTILITY PURPOSES AND ARE APPURTENANT TO THE PARCELS WITHIN THE PARCEL MAP (AS NOTED).
- ② AREA "N" IS A 20' EASEMENT FOR WATER LINE PURPOSES PER 10 PM 19. NO BENEFICIARY SPECIFIED.
- ③ AREAS "M" AND "N" ARE EASEMENTS FOR WATER PIPELINE AND INCIDENTAL PURPOSES APPURTENANT TO PARCELS IN 17 PM 15.
- ④ AREA "K" IS A 50' ROAD AND P.U.E. APPURTENANT TO PARCELS IN 25 PM 59 FOR ROAD AND UTILITY PURPOSES AND OFFERED FOR DEDICATION TO PLACER COUNTY IN V. 3771 PG. 212 O.R.P.C.
- ⑤ MULTI-PURPOSE EASEMENT (M.P.E.) APPURTENANT TO PARCELS IN 25 PM 59 FOR ANY AND ALL UTILITY PURPOSES, FOR EARTH SLOPES, EROSION CONTROL AND DRAINAGE.
- ⑥ A MEADANDERING DRAINAGE EASEMENT (M.D.E.) PER M MAPS 55 IS A NEVADA IRRIGATION DISTRICT SPILL CHANNEL CAPABLE OF DISCHARGING 55 CUBIC FEET PER SECOND.

KEYNOTES

- ⑦ 10' WIDE MULTI-PURPOSE EASEMENT (M.P.E.) PER M MAPS 55 LYING ADJACENT TO ALL ROADS FOR ELECTRIC AND COMMUNICATION SERVICES, DRAINAGE, SLOPES AND EROSION CONTROL AND TO TRIM AND REMOVE TREES.
- ⑧ 15' WIDE IRRIGATION EASEMENT FOR UNDERGROUND PIPELINES AND APPURTENANCES FOR THE PURPOSE OF SUPPLYING UNTREATED WATER FROM THE COMBIE-OPHIR CANAL TO LOTS WITHIN THE M MAPS 55 SUBDIVISION.
- ⑨ 50' WIDE MEADANDERING DRAINAGE EASEMENT (M.D.E.) PER M MAPS 55 IS FOR THE FLOW OF DRAINAGE WATERS THROUGH THE NATURAL SWALES.
- ⑩ 10' WATER LINE EASEMENT TO D.R. MILLER PER 14%OR/298
- ⑪ ROADS ARE RIGHTS OF WAY THAT HAVE BEEN ACCEPTED FOR DEDICATION BY THE COUNTY. CONSULT A TITLE COMPANY TO DETERMINE IF ROADS CAN BE USED FOR PUBLIC UTILITIES.

LEGEND

LINE/SYMBOL	DESCRIPTION/ABBREVIATION
---	PROPERTY LINE
---	PROPOSED PIPELINE ALIGNMENT
---	PROPOSED PIPELINE ALIGNMENT (ALTERNATIVE 1)
---	PROPOSED PIPELINE ALIGNMENT (ALTERNATIVE 2)
---	EASEMENT (AS NOTED)
---	IRRIGATION EASEMENT (AS NOTED)
---	NEVADA IRRIGATION DISTRICT EASEMENT (COMBIE-OPHIR CANAL)
---	MEANDERING DRAINAGE EASEMENT (M.D.E.)
---	CENTERLINE (CL)

SCALE	DATE	REVISIONS
1" = 120'		
DRAWN BY		
DESIGNED BY		
CHECKED BY		

GK Giuliani & Kull Auburn, Inc.
 Engineers • Planners • Surveyors
 Post Box 786, Auburn, CA 95604
 (530) 885-5107 Fax (530) 885-5157
 Auburn • San Jose • Oakdale • Sacramento

CVPCSD
KENNETH PIPELINES EXTENSION
 AUBURN
 PLACER COUNTY
 CALIFORNIA

EXHIBIT



SHEET	1
OF 1 SHEETS	
DATE	MARCH 24, 2023
JOB NO.	22014

Figure 6 - Existing Easements

Easement - G1 - The NID canal easement encumbers this parcel and runs along the north, east and south sides of the property as noted above. There is a short segment on the western portion of the property where the easement increases from 40-feet wide to 50-feet wide for unknown reasons.

Easement G-2 - A meandering drainage easement (MDE) runs across this property in a roughly east/west direction. This drainage is associated with the spill from the NID canal as well as some natural drainage in the area. Flow through the MDE cannot be restricted by the project. Avoiding the MDE is more important from an environmental constraints perspective discussed below.

Easement G-3 - There is a multipurpose easement that overlays the driveway of this parcel. The MPE is written as 'appurtenant' to the parcel, so would not be considered useable as written for the installation of a District pipeline and a new easement would be necessary.

Kimo and Kenneth Way. The roadways in the area include Kimo Way and Kenneth Way. These roads are private and not maintained by the County or the District in the project area. The existing documentation shows that there is a 15' irrigation easement for untreated water and a multipurpose easement (MPE) over the roadway and 10-feet beyond both shoulders. Whether the pipeline can be installed within the MPE is not clear based on the documentation. Discussion with the road association (if an entity exists) or the individual property owners will be necessary regarding the possibly of a treated water pipeline specific to the proposed project.

Environmental Constraints

An environmental constraints analysis was conducted by the RCH Group on behalf of the District. The purpose of the environmental constraints analysis was to identify environmental resources in the area prior to selection of the preferred alignment and design. Impacts to environmental resources can be avoided or at least minimized to the extent possible during the planning and design phases if identified early in the project planning phase. Minimizing impacts will protect the resources and reduce the project cost and construction schedule.

The environmental constraints analysis is included in Appendix A. Results of the analysis are summarized below.

Cultural Resources. Archeologists from the Natural Investigations Company, Inc. performed the cultural resources review which included a database review and pedestrian survey of the project area. Databases included:

- North Central Information Center (NCIC) at Sacramento State University
- Sacred Lands File (SLF) search conducted by the Native American Heritage Commission (NAHC)
- Search of the University of California Museum of Paleontology (UCMP) database

The NCIC records search for the Project did not identify any previous cultural resources surveys or previously recorded cultural resources in the PAL. The SLF search for the Project yielded positive results for the presence of sensitive Native American resources in the area. Regardless of the results of the SLF search, the Native American community did not express any concerns regarding the Project and ge archaeological analysis determined that the sensitivity of the PAL for the presence of buried deposits of cultural resources is very low.

The UCMP database search did not identify any paleontological resources in the PAL and the paleontological sensitivity of the area is low. The pedestrian surface survey of the PAL did not identify any prehistoric or historic cultural resources (e.g., prehistoric or historic sites or isolated artifacts) or any indication of buried deposits of cultural resources but did identify that the Project pipeline alignment crosses a segment of the historic Combie-Ophir Canal.

The Combie Ophir Canal is part of the Nevada Irrigation District's (NID) water supply system. The segment of the canal in the project area does not appear to meet the eligibility criteria for the California Register of Historical Resources (CRHR), but the entire Combie-Ophir Canal is not formally documented and the eligibility of the entire canal for the CRHR is not determined. Therefore, Natural Investigations recommends a finding of *Less than Significant Impact* on cultural resources for the Project pursuant to CEQA. Project specific mitigation measures are not necessary because the Project will implement NID's standard set of requirements for projects crossing the Combie-Ophir Canal that will adequately protect it from any Project related activities.

Biological. A biological assessment was conducted to identify and evaluate potential impacts on biological resources within and close to the proposed pipeline paths, including threatened, endangered, and other special status species, sensitive habitats, and sensitive plant communities. A field survey was conducted on May 25, 2023, by Jeff Glazner of Salix Consulting, Inc. The findings and methodology are discussed further in Appendix A of this report.

Aquatic Resources. The study area has two drainage swales that flow from the Combie Ophir Canal on the eastern side to the west (see Figure 2 - Appendix A). These drainages are either pass-through drainages under the canal, are released from the canal, or originate as seepage from the earthen canal bank. They support herbaceous aquatic vegetation and to a limited degree, woody aquatic vegetation.

They carry very low flows, and both are vegetated throughout and do not exhibit bed and bank morphology or any evidence of scouring flows.

These features are not likely under Corps of Engineers jurisdiction, but it is likely that the State of California (Regional Water Quality Control Board) would take jurisdiction. These drainages are not likely under California Department of Fish and Wildlife jurisdiction (Lake and Streambed Alteration Agreement) because they lack a riparian corridor. The approximate location of sensitive areas are shown in biological section of the environmental report in Appendix A.

Special Status Species. The California Natural Diversity Database (CNDDDB) was queried to determine if any special status species are known from the project area. A two-mile radius map was generated which reveals only one plant species, Jepson's onion (*Allium jepsonii*), and no animal species (Figure 3 - Appendix A).

For plants, the only special status species that may occur in the study area occur on serpentine soils, which occur nearby but are not present in the study area. Jepson's onion is known from just west of the site on serpentine soils. The study area is not suitable for this species. No other special status plant species are known from the area, and none are expected to occur.

For animals, the CNDDDB did not reveal any special status species in the surrounding area, and none are expected to occur.

Nesting birds would occur on or adjacent to the study corridor. The nesting season is from February through August.

Biological and Aquatic Resource Conclusions and Recommendations. The study area is situated in a rural residential foothill setting with a natural landcover of foothill/oak woodland habitat. The County should be consulted for any proposed impacts to oak trees. The area has an extensive irrigation network, and the influence of warm-season water is substantial. The study area contains drainage swales and ponds that are present because of irrigation water. The proposed pipeline will cross these drainages and if there is ground disturbance in an aquatic region, state and possibly federal permits may be required. If wetland impacts are triggered, a cultural resources analysis would also need to be conducted if the impacts are under Corps' jurisdiction. Delineation of these sensitive areas will be completed as part of the design process to avoid or minimize the extent of the impact.

Hazards and Hazardous Materials. The Project area is not on or near a listed hazardous waste site. Database searches were conducted, including a search of the Department of Toxic Substances Control (DTSC) Envirostor database and the State Water Resources Control Board (SWRCB) Geotracker database. There are no nearby hazardous waste sites or leaking underground storage tank sites that would present an environmental constraint.

References

Department of Toxic Substances Control (DTSC), *DTSC's Envirostor Database*,
<https://www.envirostor.dtsc.ca.gov/public/>, accessed May 25, 2023.

State Water Resources Control Board (SWRCB), *Geotracker*, <https://geotracker.waterboards.ca.gov/>,
accessed May 25, 2023.

Noise. The field survey conducted by Paul Miller of RCH Group on March 25, 2023, did not identify specific noise concerns such as airplanes or other ambient noise sources within the project area. Potential noise impacts would be associated with the construction phase of the pipeline.

During the construction phase, noise generated from heavy machinery, equipment, and construction activities would temporarily affect nearby residences. Standard noise mitigation measures can be implemented to minimize noise impacts. Typically, these mitigation measures would limit the hours of construction so that nearby residences are not disturbed during nighttime hours. Construction activities that generate significant noise, such as heavy machinery operations, will be scheduled during specific daytime hours to minimize disruption to nearby residences.

Regarding the operational phase of the pipeline, noise generated from the normal functioning of the pipeline infrastructure, including pumps and valves, is not expected to create a significant noise impact.

Cumulative Impacts. The project area is a rural residential neighborhood, and no additional developments are known or anticipated that would have impacts that would be cumulatively

considerable with the project effects evaluated in this report for cultural and biological resources impacts, construction noise and hazardous materials.

Compliance with CEQA will be necessary prior to construction of the project. CEQA will require the preparation of an initial study/mitigated negative declaration.

Engineering/Constructability and Operations

Engineering, constructability and operation/maintenance factors are discussed in this section for the alternative alignments on Parcel G. The alignment on Parcel B is constrained to the existing easement on the southern edge of the property. There are no engineering, constructability or operational/maintenance issues that would prevent implementation of the pipeline along this portion of the alignment. Similarly, the portion of the alignment along Kimo Way to Kenneth Way would be similar. The comparison of the alternatives related to engineering, constructability and operation/maintenance is limited to the three sub-alternatives on Parcel G.

Engineering, construction and operational/maintenance related criteria are included in Table 2 along with rankings. Evaluation criteria are summarized below:

Soil Types – This criterion takes into consideration the presence of rock, groundwater, unstable soils and other geologic factors that could impact pipe design or constructability. It is likely that the alternatives are equal on this criterion. Groundwater could be a factor, but the pipeline will be offset from the canal to stay out of the existing NID canal and should not be an issue.

Impacts on Future Use of Property – An easement will be necessary for the pipeline. Ideally easements are located near the property lines and would not impact the future development of the parcel. In this case Alt 1, located on the southern end of the parcel and adjacent to the existing NID parcel, is considered the best alternative. Alt 2 bisects the property and would encumber future use. Alt 3 is near the northern portion, but close to the house and developed portions of the parcel and would hinder the property owner's use.

Length – Construction and maintenance costs for the pipeline correspond to pipeline length. An alignment that is shorter is preferred over a longer segment.

Environmental and Permitting. A description of environmental and permitting factors was previously discussed. Minimizing environmental and permitting impacts decreases the project cost and reduces the timeline of project implementation. Operations and maintenance activities are also simplified by avoiding environmentally sensitive areas.

Pipeline Maintenance. Inspection and maintenance of the pipeline is necessary. This would include easy access, ability to mobilize equipment and ability visually to observe the pipeline/pipeline easement. Alt 1 is considered the highest rank. It is easily accessible via the canal without inconveniencing the property owner. Alt 3 is the least desirable due to its proximity to the existing home. Table 2 includes a weighting factor and rank of the three alternatives.

Table 2
Comparison Matrix

Criteria	Weight	Rank			Weighted Score		
		Alt 1	Alt 2	Alt 3	Alt 1	Alt 2	Alt 3
Soil types and other	2	1	3	2	2	6	4
Impact to future uses on property	5	3	1	2	15	5	10
Length	4	2	3	1	8	12	4
Permitting/Environmental	4	3	1	2	12	4	8
Pipeline maintenance	5	3	2	1	15	10	5
Total					52	37	31

Alt 1, the southern most alignment on Parcel G, is considered the best alternative and recommended as the preferred alignment in this portion of the proposed project area.

Alignment

The proposed alignment is shown in Figure 7. It consists of the connection to the existing water line located just east of Parcel B. The pipeline then extends along the existing 20-foot easement towards the NID Combie Ophir Canal. The details related to the canal crossing must be confirmed with NID through an application process. The crossing may be required to go beneath the canal based on conversations with NID staff. Construction of the portion of the pipeline that crosses the canal will likely be limited to the fall season when the canal is out of service and should be factored into the construction schedule to avoid delays.

The pipeline on Parcel G will follow the canal as shown and cut off the small peninsula on the southeast side of the parcel and extend west and parallel the canal along the south side of the parcel. The pipeline will be located approximately 5-feet off the northern edge of the NID easement in this area.

The pipe would then extend north on the driveway to the cul-de-sac to Kimo Way. The pipe crosses a small natural drainage that seems to remain wet due to seeps/leaks from the canal. The drainage runs through a culvert under the driveway and is approximately 6-feet deep under the roadway, which leaves ample cover to lay the pipe over the top of the culvert and avoid any work in the drainage, which could trigger a permit. Use of ductile iron pipe and engineered backfill may be recommended depending on the depth of the new water line.

The pipeline would then run approximately 1,500 feet along Kimo Way to the intersection of Kenneth Way, then approximately 900 feet south to the point of connection on Kenneth Way. A pressure reducing station (PRS) is necessary to reduce the pressure to match the pressure zone beyond the Stanley Lane PRS within the existing system. Two possible locations are shown on Figure 7.



Legend

- Proposed Alignment
- Existing Pipeline
- Connection Point
- New PRV Station
- Roads

Figure 7 - Proposed Alignment

NORTH

1" = 500'

COORDINATE SYSTEM:
CALIFORNIA STATE PLANE, ZONE II,
NAD83, U.S. SURVEY FEET

SOURCES:
- HYDROS ENGINEERING
- PLACER COUNTY GIS DATA

Pipeline alignments shown considered preliminary until completion
of any easement acquisitions are complete pending further discussions with property owners.

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The PRS will be a below grade vault with two pressure reducing valves and a traffic rated lid. The two locations shown on Figure 7 are along the roadway and in wide spots on the road to minimize traffic impacts when accessing the PRS for maintenance.

The final tie-in point on the western side of the project would be in the vicinity of 6000 Kenneth Way. Field exploration will be necessary to locate the end of the District’s existing 6-inch main in the area.

Engineer’s Estimate. The cost estimate for the project is included in Table 3. The estimate is based on recent construction bids for a similar project pipeline in the area. Costs are based on the June 2023 ENR 20-Cities CCI – 13,345. Costs should be updated annually to reflect increases resulting from inflation.

Table 3
Engineer’s Estimate

ITEM	COST
CONSTRUCTION	\$770,000
PLANNING/PREDESIGN - FUNDED SEPARATELY	---
ENVIRONMENTAL (IS/MND)	\$30,000
DESIGN/CONTRACT DRAWINGS @10%	\$80,000
CONSTRUCTION MANAGEMENT/ADMIN @10%	\$80,000
SUBTOTAL	\$960,000
CONTINGENCIES @ 20%	\$200,000
TOTAL	\$1,160,000

Notes:

1. ENR 20 Cities CCI - June 2023 - 13,345
2. No financing costs included in the estimate.
3. Planning/pre-design and environmental constraints underway and funded separately - not included in estimate.

Future Steps

The next steps in project implementation are identified in this section.

Easement Acquisition. Negotiate easements with property owners along the recommended pipeline alignment. Easements will require a topo/boundary survey of the area. The areas where easements must be obtained include:

- 3240 Sunshine Meadows – Temporary Construction Easement
- 3500 Kimo Way – TCE and permanent easement

There is a multi-purpose easement along the roadway section of the proposed alignment. Conditional Title Guarantees were acquired through a title company. Whether the MPE is adequate for the installation of a publicly owned water main is unclear at this time.

Identify whether there is an organized road association for Kimo Way and Kenneth Way (private portion of Kenneth Way). Involve those property owners in stakeholder communications. The property owners will likely want to have input regarding the construction along the private road. This would also be the

time to determine the presence of a suitable easement. If the existing MPE is not suitable as an easement for a pipeline, then each of the seven property owners that are adjacent to the roadways would need to be contacted and acquisition of an easement initiated.

Topographic Survey. Once easements are in place, or at least the promise of an easement via a written agreement, the area should be surveyed at the detailed design level, including writing up the permanent and temporary construction easements.

Detailed Design and Contract Documents. Prepare contract documents for bidding and construction. This would include drawings and specifications in accordance with rules and regulations pertaining to public work projects in California.

Coordination with NID on canal crossing and utilization of canal easement during construction for access should be addressed at this time.

Environmental. The environmental documentation should be prepared for the project. This would include the CEQA documentation in the form of an Initial Study/Mitigated Negative Declaration (IS/MND). CEQA documents generally have an approximately five-year window once prepared. The environmental constraints analysis identified areas of significance that can be mitigated with proper design and construction methods as previously noted.

Project Funding. The District should work to identify project funding in the form of loans, grants or reserves. Staging the implementation is a good way to minimize or avoid rate impacts.

Bidding and Construction. The bidding process, once final contract drawings are completed, is generally about a two to three month process. The construction phase will likely take six to nine months.

Appendix A
Environmental Constraints Analysis

CHRISTIAN VALLEY PARK CSD KENNETH PIPELINE EXTENSION ENVIRONMENTAL CONSTRAINTS ANALYSIS

June 28,2023



Prepared for:

**Christian Valley Park, CSD
Don Elias, General Manager**

Prepared by:

**RCH Group
6521 Chesbro Circle
Rancho Murieta, California 95683**



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APPENDICES

 A. Biological and Aquatic Resources Constraints Assessment Memo (Salix Consulting, Inc.)

 B. Cultural Resources Assessment for the Kenneth Way Pipeline Project in Northern Auburn, Placer County, California (Natural Investigation Company) – **Confidential – On file with Christian Valley Park CSD (available to authorized individuals).**

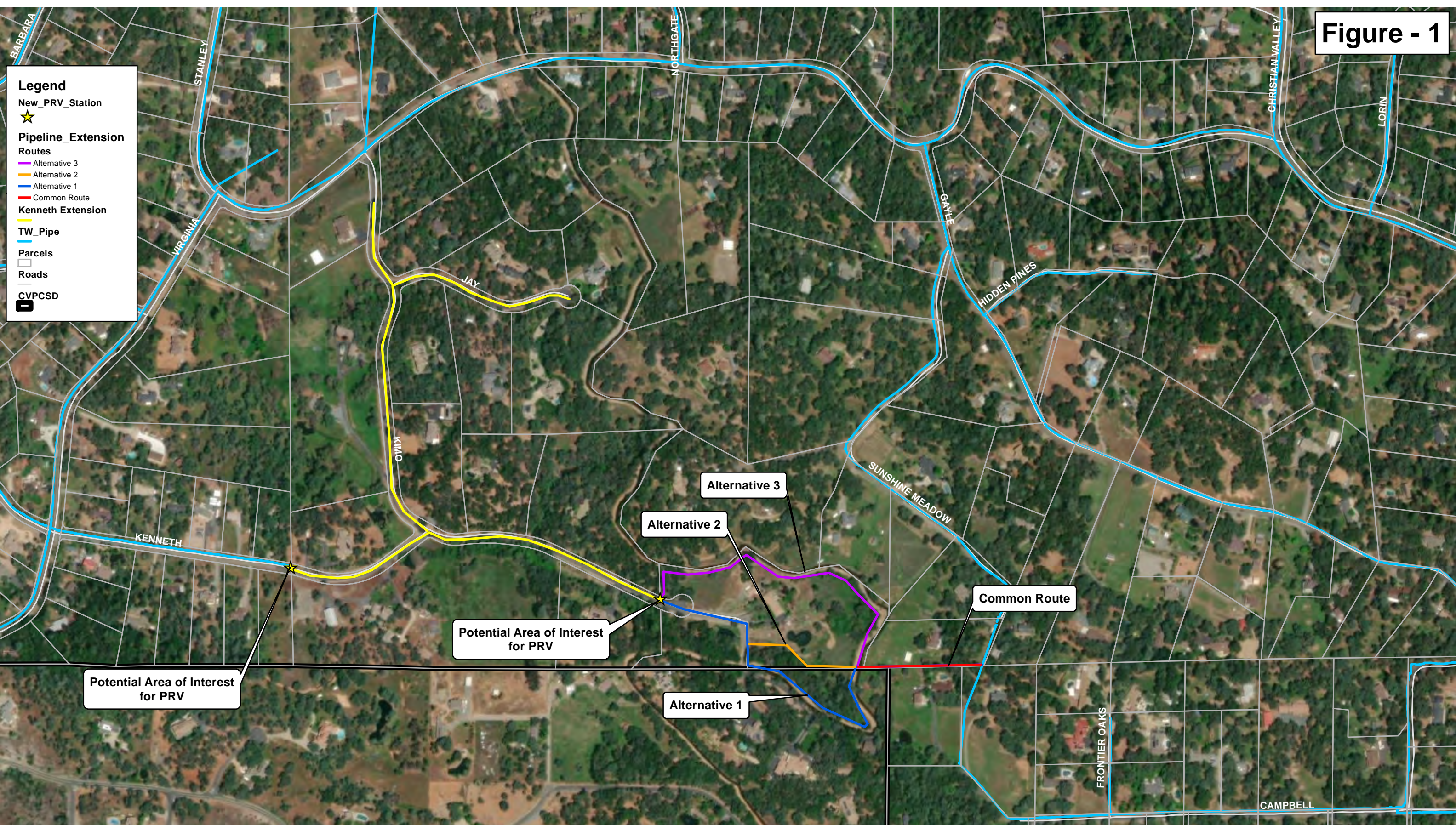
INTRODUCTION AND SCOPE OF ANALYSIS

The project consists of approximately 3,500 feet of new 8-inch diameter pipeline. The new pipe will connect to existing pipelines located in the vicinity of Campbell Way and Kenneth Lane. Approximately 2,300 feet of the new pipeline will be along existing roadways. The remainder will be private property through fields and undeveloped portions of parcels. A pressure reducing station will be located on the shoulder of Kenneth Way or Kimo Way and is necessary to reduce pressures to match an existing pressure zone on the back half of the District's distribution system.

This report focuses on environmental constraints for two alternative routes (Alternative 1, and Alternative 2). Another alternative (Alternative 3) was considered but eliminated due to concerns about effects on the adjacent home if there were a pipeline leak. These alternative are on private property through fields and undeveloped portions of parcels. The RCH team of consultants analyzed the two alternatives as shown in Figure 2. The analysis included a field walk of Alternatives 1 and 2 routes with Hydros Engineering on May 25, 2023. This report contains analysis of the following environmental topics (as they would affect the two alternatives):

- Biological and aquatic resources within and close to the proposed pipeline paths, including threatened, endangered, and other special status species, sensitive habitats, and sensitive plant communities.
- Cultural resources, including the presence or potential presence of sensitive archaeological resources within the proposed pipeline paths.
- Any hazards and hazardous materials, including toxic contamination from past uses, which are known to be present.
- Noise impacts associated with the construction and operation of the pipeline, including potential disturbance to nearby residences.
- Cumulative Impacts associated with other projects in the area that could combine and create environmental impacts.

Figure - 1




Kenneth Way Proposed Routes

CVPCSD - January 2021

COORDINATE SYSTEM:
CALIFORNIA STATE PLANE, ZONE II,
NAD83, U.S. SURVEY FEET

SOURCES:
- HYDROS ENGINEERING
- PLACER COUNTY GIS DATA

Figures for concept only, further work with property owners, environmental review,
and surveyors needed before project can be considered for approval.


NORTH
1" = 500'

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ENVIRONMENTAL EVALUATION OF ALTERNATIVE ROUTES

Biological and Aquatic Resources

A biological assessment was conducted to identify and evaluate potential impacts on biological resources within and close to the proposed pipeline paths, including threatened, endangered, and other special status species, sensitive habitats, and sensitive plant communities. A field survey was conducted on March 25, 2023, by Jeff Glazner of Salix Consulting, Inc. The findings and methodology are discussed further in Appendix A of this report.

Aquatic Resources

The study area has two drainage swales that flow from the Combie Ophir Canal on the eastern side to the west (see Figure 2). These drainages are either pass-through drainages under the canal, are released from the canal, or originate as seepage from the earthen canal bank. They support herbaceous aquatic vegetation and to a limited degree, woody aquatic vegetation.

They carry very low flows, and both are vegetated throughout and do not exhibit bed and bank morphology or any evidence of scouring flows.

These features are not likely under Corps of Engineers jurisdiction, but it is likely that the State of California (Regional Water Quality Control Board) would take jurisdiction. These drainages are not likely under California Department of Fish and Wildlife jurisdiction (Lake and Streambed Alteration Agreement) because they lack a riparian corridor.

Special Status Species

The California Natural Diversity Database (CNDDDB) was queried to determine if any special status species are known from the project area. A two-mile radius map was generated which reveals only one plant species, Jepson's onion (*Allium jepsonii*), and no animal species (Figure 3).

For plants, the only special status species that may occur in the study area occur on serpentine soils, which occur nearby but are not present in the study area. Jepson's onion is known from just west of the site on serpentine soils. The study area is not suitable for this species. No other special status plant species are known from the area, and none are expected to occur.

For animals, the CNDDDB did not reveal any special status species in the surrounding area, and none are expected to occur.

Nesting birds would occur on or adjacent to the study corridor. The nesting season is from February through August.

Biological and Aquatic Resource Conclusions and Recommendations

The study area is situated in a rural residential foothill setting with a natural landcover of foothill/oak woodland habitat. The County should be consulted for any proposed impacts to oak trees. The area has an extensive irrigation network, and the influence of warm-season water is substantial. The study area contains

drainage swales and ponds that are present because of irrigation water. The proposed pipeline will cross these drainages and if there is ground disturbance in an aquatic region, state and possibly federal permits may be required. If wetland impacts are triggered, a cultural resources analysis would also need to be conducted if the impacts are under Corps' jurisdiction.

Cultural Resources

Cultural Resources Report Preparation

Natural Investigations Company, Inc. (Natural Investigations) was retained to conduct cultural resource investigations for the Project. The investigations included a records search conducted by the North Central Information Center (NCIC) at Sacramento State University, a Sacred Lands File (SLF) search conducted by the Native American Heritage Commission (NAHC), a search of the University of California Museum of Paleontology (UCMP) database and paleontological sensitivity analysis, geoarchaeological sensitivity analyses, pedestrian survey of the Project Area Limits (PAL) (i.e., the alignment of the approximately 2,500 foot long pipeline; which consist of Alternatives 1-2-3), and completion of a report documenting the results of investigations for the Project that complies with CEQA.

John A. Nadolski, M.A. was the Principal Investigator for the Project and primary author of the cultural report. Mr. Nadolski has thirty years of experience in California archaeology and exceeds all the requirements of the *Secretary of Interior's Qualifications Standards* at 36 CFR Part 61. Dylan Stapleton, M.A., RPA performed the pedestrian survey for the Project and prepared the field results section of the cultural report. Mr. Stapleton has twelve years of professional experience in archaeology. The format of the cultural report follows the guidelines in *Archaeological Resource Management Reports: Recommended Contents and Format* prepared by the Office of Historic Preservation (1990).

The pedestrian survey covered the Alternative 1 and Alternative 2 pathways shown in **Figure 2**. Alternative 3 was not included in the pedestrian survey because it was eliminated from consideration prior to the time of the pedestrian survey. The NCIC records search for the Project did not identify any previous cultural resources surveys or previously recorded cultural resources in the PAL. The SLF search for the Project yielded positive results for the presence of sensitive Native American resources in the area. Regardless of the results of the SLF search, the Native American community did not express any concerns regarding the Project and geoarchaeological analysis determined that the sensitivity of the PAL for the presence of buried deposits of cultural resources is very low. The UCMP database search did not identify any paleontological resources in the PAL and the paleontological sensitivity of the area is low. The pedestrian surface survey of the PAL did not identify any prehistoric or historic cultural resources (e.g., prehistoric, or historic sites or isolated artifacts) or any indication of buried deposits of cultural resources but did identify that the Project pipeline alignment crosses a segment of the historic Combie-Ophir Canal, adjacent to Alternative 1. The Combie-Ophir Canal is part of the Nevada Irrigation District's (NID) water supply system. The segment of the canal in the PAL does not appear to meet the eligibility criteria for the California Register of Historical Resources (CRHR), but the entire Combie-Ophir Canal is not formally documented and the eligibility of the entire canal for the CRHR is not determined. Therefore, Natural Investigations recommends a finding of *Less than Significant Impact* on cultural resources for the Project pursuant to CEQA. Project specific mitigation measures are not

necessary because the Project will implement NID's standard set of requirements for projects crossing the Combie-Ophir Canal that will adequately protect it from any Project related activities.

Hazards and Hazardous Materials

The Project area is not on or near a listed hazardous waste site. Database searches were conducted, including a search of the Department of Toxic Substances Control (DTSC) Envirostor database and the State Water Resources Control Board (SWRCB) Geotracker database. There are no nearby hazardous waste sites or leaking underground storage tank sites that would present an environmental constraint.

References

Department of Toxic Substances Control (DTSC), *DTSC's Envirostor Database*, <https://www.envirostor.dtsc.ca.gov/public/>, accessed May 25, 2023.

State Water Resources Control Board (SWRCB), *Geotracker*, <https://geotracker.waterboards.ca.gov/>, accessed May 25, 2023.

Noise

The field survey conducted by Paul Miller of RCH Group on March 25, 2023, did not identify specific noise concerns such as airplanes or other ambient noise sources within the project area. Potential noise impacts would be associated with the construction phase of the pipeline.

During the construction phase, noise generated from heavy machinery, equipment, and construction activities would temporarily affect nearby residences. Standard noise mitigation measures can be implemented to minimize noise impacts. Typically, these mitigation measures would limit the hours of construction so that nearby residences are not disturbed during nighttime hours. Construction activities that generate significant noise, such as heavy machinery operations, will be scheduled during specific daytime hours to minimize disruption to nearby residences.

Regarding the operational phase of the pipeline, noise generated from the normal functioning of the pipeline infrastructure, including pumps and valves, is not expected to create a significant noise impact.

Cumulative Impacts

The project area is a rural residential neighborhood, and no additional developments are known or anticipated that would have impacts that would be cumulatively considerable with the project effects evaluated in this report for cultural and biological resources impacts, construction noise and hazardous materials.

ENVIRONMENTAL CONCLUSIONS

The environmental constraints identified in this report are the ponds and drainage swales that would be in the pathway of both Alternatives 1 and 2 and oak trees that would be in the pathway of both Alternatives 1 and 2. (see **Figure 2**) As discussed on the site walk with Hydros Engineering and Salix Consulting, special construction methods (trenchless technology) could minimize impacts and strategically selecting the location of the crossing could also minimize the area impacted.

No special status plants or animals are expected to occur along Alternatives 1 and 2 routes or along the Common Route.

Natural Investigations recommends a finding of *Less than Significant Impact* on cultural resources for the Project pursuant to CEQA. Project specific mitigation measures are not necessary because the Project will implement NID's standard set of requirements for projects crossing the Combie-Ophir Canal that will adequately protect it from any Project related activities.

No other CEQA resource topics were identified that would preclude the use of Alternative 1 or 2 routes.

Appendix A

Biological and Aquatic Resources Constraints Assessment Memo (Salix Consulting, Inc.)



MEMORANDUM

To: Paul Miller, RCH Group
From: Jeff Glazner
Date: June 27, 2023
Subject: **Biological and Aquatic Resources Constraints Assessment for the Kenneth Loop Water Pipeline Study Area, Christian Valley, Placer County, CA**

Salix Consulting, Inc. (Salix) conducted a field evaluation of the Kenneth Loop Water Pipeline Alternatives. The field evaluation, conducted on May 25, 2023, was intended to identify biological or wetland constraints that may be affected by the project. All alternatives are shown in Figure 1.

Project Description

The project consists of approximately 3,500 feet of new 8-inch diameter pipeline. The new pipe will connect to existing pipelines located in the vicinity of Campbell Way and Kenneth Lane. Approximately 2,300 feet of the new pipeline will be along existing roadways. The remainder will be along private property through fields and undeveloped portions of parcels. A pressure reducing station will be located on the shoulder of Kenneth Way or Kimo Way and is necessary to reduce pressures to match an existing pressure zone on the back half of the District's distribution system.

The study area is located in a rural residential area among foothill oak woodland habitat. Large lot residential has altered the landscape but there are substantial groves of oaks among the residential landscape. Aquatic drainages and small ponds are scattered throughout the area and are mostly wetted by irrigation runoff.

Aquatic Resources

The study area has two drainage swales that flow from the Combie Ophir Canal on the eastern side to the west (see Figure 2). These drainages are either pass-through drainages under the canal, are released from the canal, or originate as seepage from the earthen canal bank. They support herbaceous aquatic vegetation and to a limited degree, woody aquatic vegetation.

They carry very low flows and both are vegetated throughout and do not exhibit bed and bank morphology or any evidence of scouring flows.

These features are not likely under Corps of Engineers jurisdiction, but it is likely that the State of California (Regional Water Quality Control Board) would take jurisdiction. These drainages are not likely under California Department of Fish and Wildlife jurisdiction (Lake and Streambed Alteration Agreement) because they lack a riparian corridor.

Special Status Species

The California Natural Diversity Database (CNDDDB) was queried to determine if any special status species are known from the project area. A two-mile radius map was generated which reveals only one plant species, Jepson's onion (*Allium jepsonii*), and no animal species (Figure 3).

For plants, the only special status species that may occur in the study area occur on serpentine soils, which occur nearby but are not present in the study area. Jepson's onion is known from just west of the site on serpentine soils. The study area is not suitable for this species. No other special status plant species are known from the area and none are expected to occur.

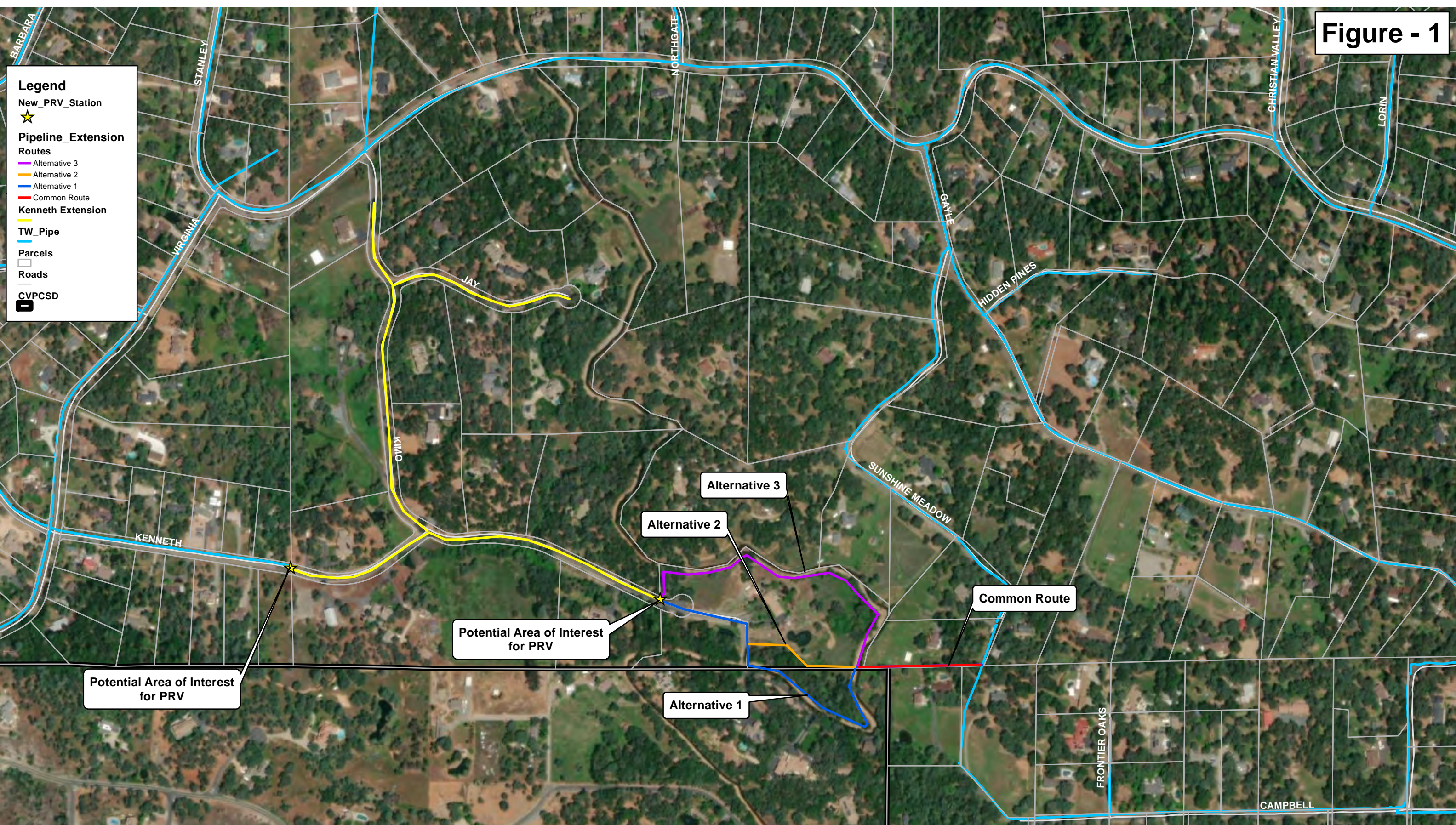
For animals, the CNDDDB did not reveal any special status species in the surrounding area and none are expected to occur.

Nesting birds would likely occur on or adjacent to the study corridor. The nesting season is from February through August.

Conclusions and Recommendations


The study area is situated in a rural residential foothill setting with a natural landcover of foothill/oak woodland habitat. The County should be consulted for any proposed impacts to oak trees. The area has an extensive irrigation network and the influence of warm-season water is substantial. The study area contains drainage swales and ponds that are present because of irrigation water. The proposed pipeline will cross these drainages and if there is ground disturbance in an aquatic region, state and possibly federal permits may be required. If wetland impacts are triggered, a cultural resources analysis would also need to be conducted if the impacts are under Corps' jurisdiction.

Figure - 1



Kenneth Way Proposed Routes

CVPCSD - January 2021


NORTH
 1" = 500'

COORDINATE SYSTEM:
 CALIFORNIA STATE PLANE, ZONE II,
 NAD83, U.S. SURVEY FEET

SOURCES:
 - HYDROS ENGINEERING
 - PLACER COUNTY GIS DATA

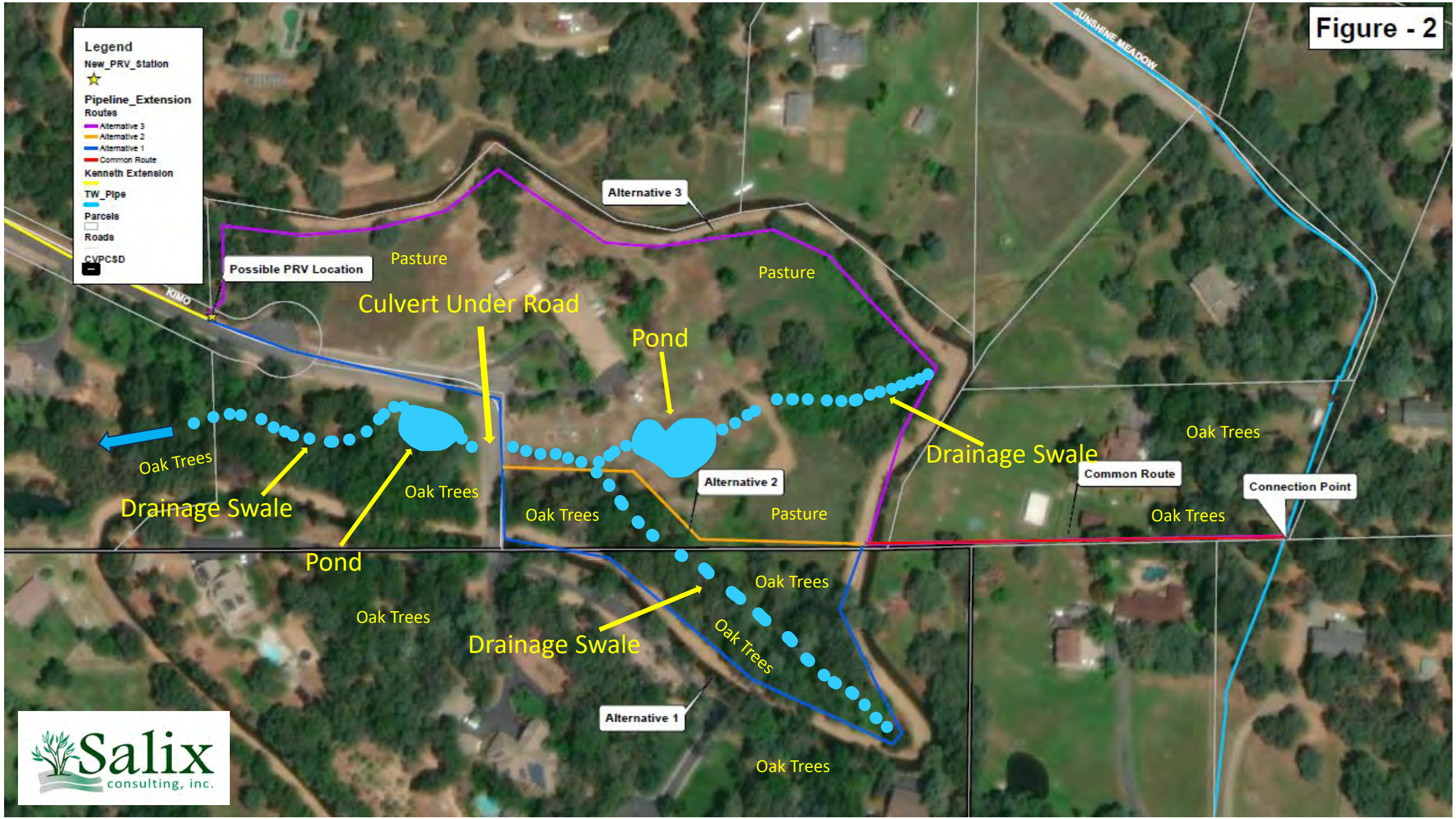
Figures for concept only, further work with property owners, environmental review,
 and surveyors needed before project can be considered for approval.



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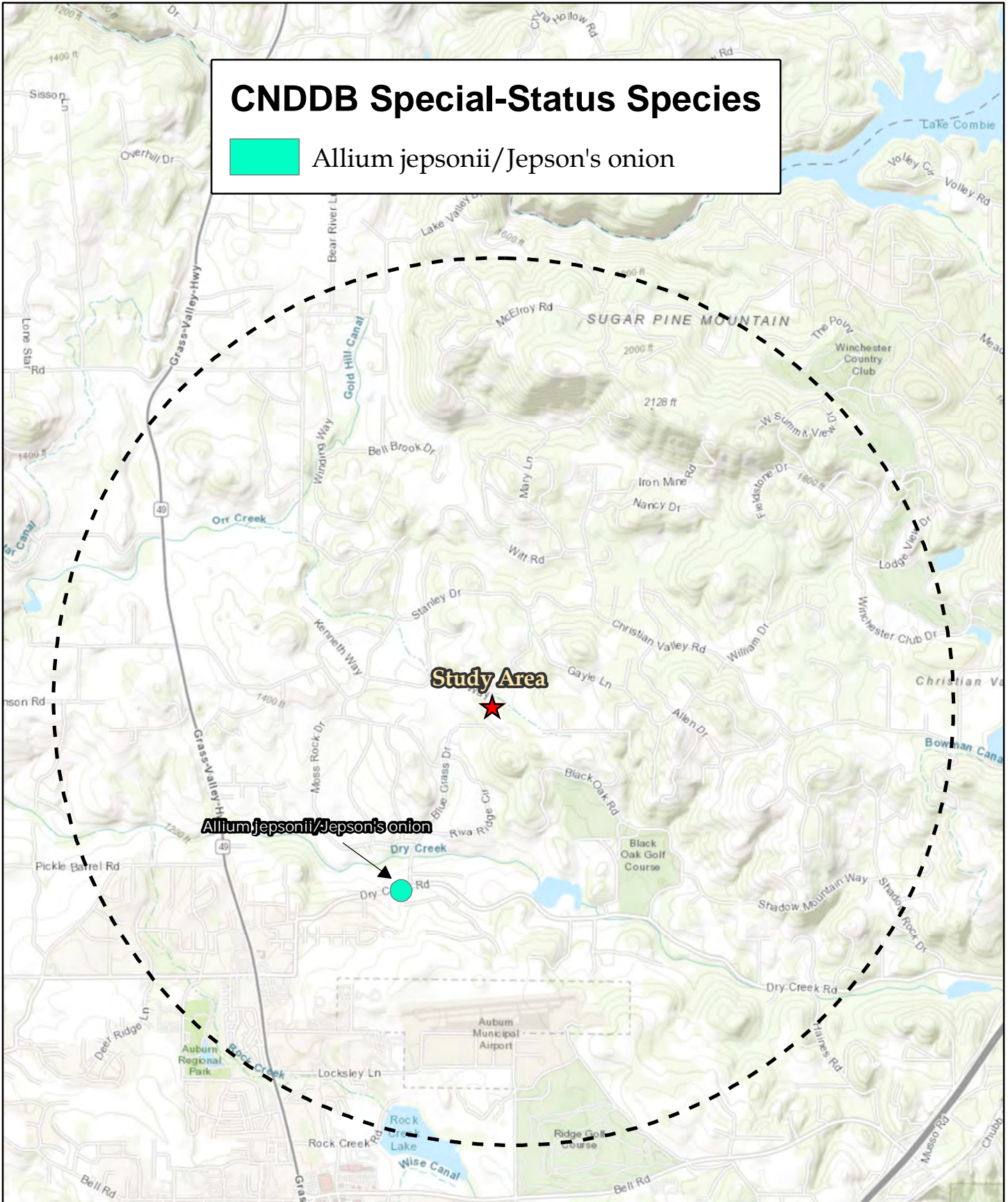
Figure - 2

- Legend
- New_PRV_Station
- ★
- Pipeline_Extension Routes
- Alternative 3
- Alternative 2
- Alternative 1
- Common Route
- Kenneth Extension
- TW_Pipe
- Parcels
- Roads
- CVPCSD



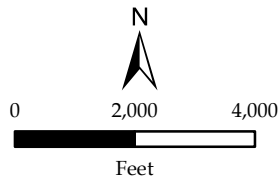
CNDDDB Special-Status Species

 Allium jepsonii/Jepson's onion



Allium jepsonii/Jepson's onion

Study Area





 Study Area
 2-Mile Buffer

Figure 3

CNDDDB OCCURRENCES MAP

Christian Valley CSD

Placer County, CA