



CABY INTEGRATED REGIONAL WATER MANAGEMENT PLAN
PROPOSITION 84, ROUND 2 IMPLEMENTATION GRANT



2 CITY OF PLACERVILLE WATERLINE REPLACEMENT PROJECT

GENERAL INFORMATION	
Project Title	City of Placerville Waterline Replacement
Abstract	This project will design, permit and construct 2,000 feet of 8-inch and 12-inch pipeline to replace aging and leaking pipeline in the City of Placerville's water system. The waterlines to be replaced are the City's highest priority pipeline improvements, and contribute significantly to the 20 percent of water that is unaccounted for within the City's distribution system. Through this project the City is improving water supply reliability by improving water system efficiency thus decreasing source water and energy demand and promoting overall headwater sustainability.
Organization	City of Placerville
Disadvantaged Community	N/A
Grant Funds Requested	\$950,000
Non-State Match	\$491,929 (34%)
Total Budget	\$1,441,929
Watershed	American River
County	El Dorado
Status of Project Design	PSOMAS Engineering worked with the City to complete 95% engineering design/construction documents. The City will complete the remaining 5%. The El Dorado County Water Agency (EDWA) has provided funding for design/construction documents. City staff will provide inspection and construction management services for the project.
Existing Data and Studies	<ul style="list-style-type: none"> The City of Placerville completed a Water Master Plan (WMP) in 2005 that identifies and prioritizes the water infrastructure that needs to be replaced/upgraded or looped for improved system reliability. City staff has further refined and prioritized pipeline reaches identified in the WMP and has developed this project to address its highest priority reliability, water loss and fire flow issues.

	<ul style="list-style-type: none"> • This Project is included in the City of Placerville’s Capital Improvement Program (CIP). This includes a project description, cost summary, a list of potential funding sources and the impact on annual maintenance and operation costs. • City of Placerville Fire Flow Test Data: Inadequate Pressures for fire flow
Status of CEQA, NEPA, and other environmental laws	A CEQA Notice of Exemption, as a Statutory Exemption under Public Resources Code, Section 21080.21, for the Project was filed with the El Dorado County Clerk on June 26, 2012 (Attached). The lead agency, the City, found the length of pipeline replacement and relocation does not exceed one mile in length and is located within existing public streets/rights-of-way making the project eligible for an exemption.
Work that will be completed prior to October, 2013 (assumed contract date)	95% design documentation and Environmental Compliance documentation.
Procedures for coordination with partner agencies and organizations	The City will be the sole recipient of the grant funds. The City will continue to coordinate with CABY and The Sierra Fund for quarterly and annual reports.
Description of synergies or linkages between other CABY IRWMP projects	This project is part of a larger initiative across the region that seeks to elevate DAC projects to “ready to proceed” status. This project is also part of an initiative that seeks to systematically improve degraded, aging or failing infrastructure that has a direct conservation and/or water quality benefit. This project also supports the following CABY linkages and synergies objectives, articulated in the Introduction to the Proposal: selection of projects at multiple elevations: developing a mix of localized projects that address clear single-location needs with projects that have a regional impact; inclusion of pilot, demonstration or model projects whose benefits can then be expanded through implementation of similar projects across the region; siting of projects across all of the primary CABY watersheds; including projects that directly address the resiliency of natural and infrastructure systems; inclusion of projects which result in direct water conservation and/or use efficiencies; creation of implementation actions/projects that represent adaptive management options in response to climate change; pairing projects that create synergies of impact internally and between projects; balancing infrastructure and natural resource projects within each implementation package; and creating a balance of project sponsors across all stakeholder groups, including DAC, governmental agencies and non-profit organizations.

Status of acquisition of land or rights of way if applicable	The consultant team will prepare and process applications for encroachment permits needed from Caltrans for pipeline construction activities that take place within Highway 49 easements.
If project is part of a multi-phased project, describe how the project can operate as a stand-alone project	The Implementation of the Project will be phased; in Phase I, which is the subject of this application, the City proposes to replace waterlines A and AA located on Pardi Way, waterline B on Big Cut Road, waterline C on Gilmore Street and waterline D on Sacramento Street (Exhibit A). In Phase II, the City proposes to replace waterlines CC, E and F. This phase of the project is not dependent on Phase II and can operate as a stand-alone project.
SPECIFIC GOALS AND OBJECTIVES OF THE PROJECT	
Goal	Measurable Objectives
Ensure adequate and reliable water supply: Conservation, Aging Infrastructure	<ul style="list-style-type: none"> • Reduce total demand for raw water by 70-acre feet annually • Reduce long-term water losses by replacing 3,700 feet of aging pipeline
Anticipate climate change needs and be prepared to respond adaptively to human and ecosystem needs	<ul style="list-style-type: none"> • Lower air quality impacts by 34 tons GHG reduction • Lower air quality impacts by 600 MCF natural gas savings • Lower air quality impacts and reduce pollutants by 61 lbs/yr (CO, PM, VOC and TOC) • Implement new climate change adaptive strategy
Ensure sufficient water quality to support healthy ecosystems and dependent organisms: Sedimentation	<ul style="list-style-type: none"> • Protect water quality by reducing soil erosion and sedimentation in streams by reducing number of pipeline failures
Overarching Objective: Education and Outreach will be integrated into all CABY projects and programs	<ul style="list-style-type: none"> • Regular reports to CABY IRWM partners • Regular updates to local community about project benefits and progress
Overarching Objective: Share useable data and information across the region	<ul style="list-style-type: none"> • Regular data updates to CABY website and state and all other relevant databases and agencies.

<p>Overarching Objective: All planning in region to be coordinated to ensure communication and shared solutions.</p>	<ul style="list-style-type: none"> • Regular communication with CABY partners to share project progress, lessons learned and applicability of project as a model to other partners in region.
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PURPOSE AND NEED OF THE PROJECT

The City of Placerville has a population of 10,350 and owns and operates its own potable water storage and distribution facilities. Surrounded by El Dorado Irrigation District (EID), the City receives all its water supply from EID through a total of seventeen interties consisting of ten bulk flow meters and seven small service meters that are located on the periphery of the City. The City pays EID for the water based on flow through these meters.

The City’s water distribution system is comprised of eight separate service zones separated by pressure reducing valve (PRV) stations or normally-closed isolation valves. The distribution system includes one 40,000 gallon storage tank and approximately 37-miles of pipelines ranging in diameter of four to 18 inches and two miles of pipeline less than 4-inches in diameter. EID considers the City to be a “municipal” customer, and currently EID provides all storage for the City except for the City’s Sierra Service Zone. There are three pump stations in the City’s distribution system: the Sierra Service Zone hydro-pneumatic system and two small privately operated facilities. These two facilities were developed to increase City water pressure to two new small developments within the City. They remain privately operated and not incorporated into the City’s distribution system due to not being completed to City specifications.

The project will help to ensure the reliability of the City’s water supply deliveries and help conserve the water that is being lost through the aging leaky pipeline system. The waterlines to be replaced are the City’s highest priority pipeline improvements, and contribute significantly to the 20% of water that is unaccounted for within the City’s distribution system. The City’s 20% unaccounted for water is higher than the 10% expected for urban water systems. This is primarily due to infrastructure age, some of which date back to the Gold Rush, and for this particular project, pipelines dating back to the early 1900’s. City maintenance staff has observed water surfacing along the cross country pipeline that will be replaced as part of this project and estimate that this pipeline is contributing significantly to the City’s unaccounted for water.

The City of Placerville completed a Water Master Plan (WMP) in 2005 which identifies and prioritizes the water infrastructure that needs to be replaced/upgraded or looped for improved system reliability. City staff has further refined and prioritized pipeline reaches identified in the WMP and developed this project to address its highest priority reliability, water loss and fire flow issues. When comparing the amount of water purchased by the City with the amount of water delivered to customers through retail meters, the City’s Unaccounted for Water is calculated to be 20% for calendar year 2012. As a result, the City has strategically targeted segments of the water system for replacement and this project is included in the City of Placerville’s Capital Improvement Program (CIP) as a high priority project.

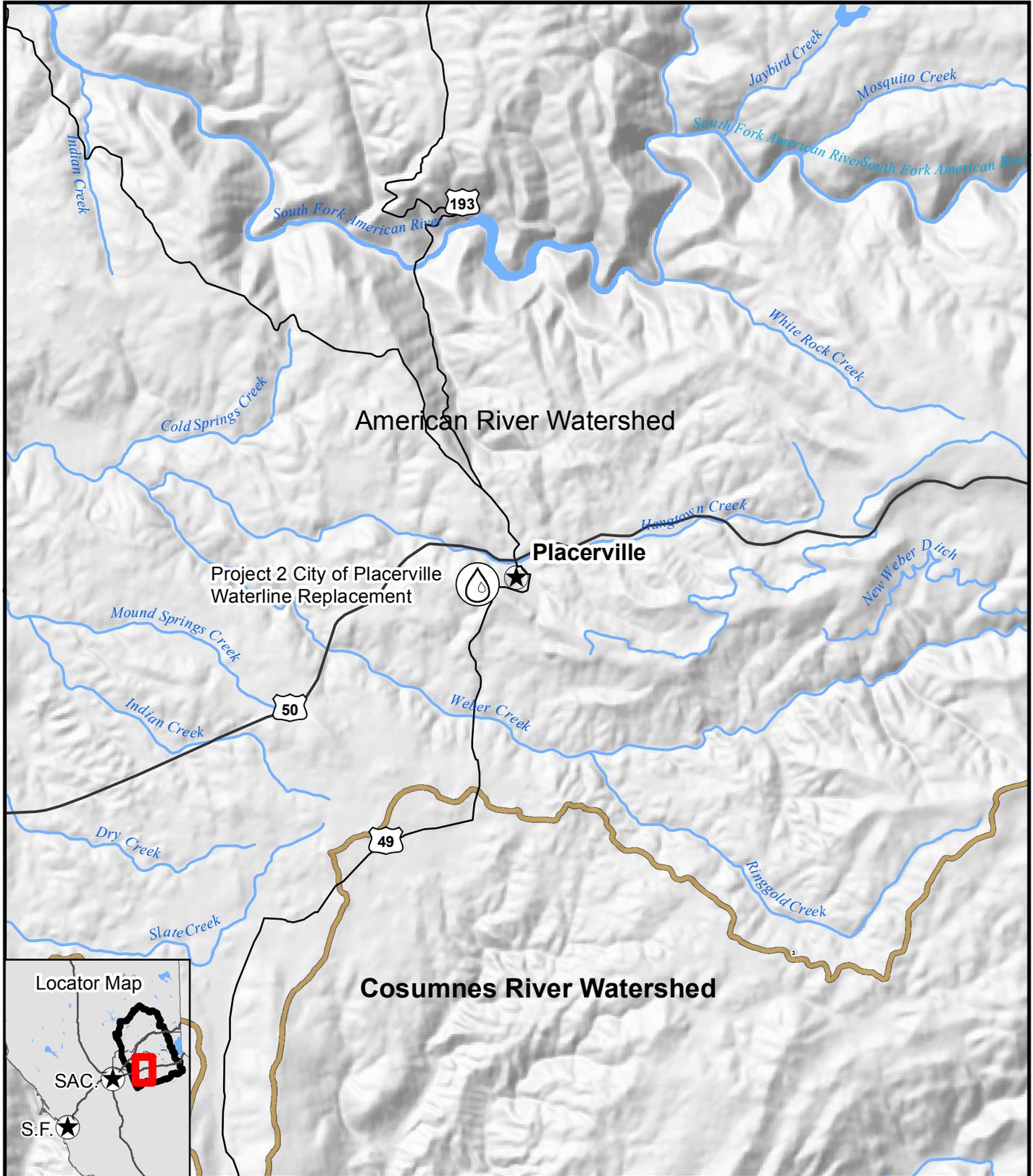
In addition to reducing water loss, these infrastructure upgrades will improve public health and safety that is currently at risk by providing minimum flow requirements for fire protection for local resources, properties and people. Through this project the City is improving water supply reliability by improving water system efficiency thus decreasing source water and energy demand and promoting overall headwater sustainability.

DESCRIPTION OF THE PROJECT

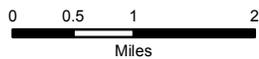
The City of Placerville (City) Pardi/Big Cut/Sacramento Street Waterlines Replacement Project (project) consists of replacing and relocating water distribution pipeline sections that are: 1) deteriorated and leaking, 2) undersized for domestic and fire protection needs, and/or 3) poorly located for maintenance due to inaccessibility. The implementation of the project will be phased; in Phase I, which is the subject of this application, the City proposes to replace waterlines A and AA located on Pardi Way, waterline B on Big Cut Road, waterline C on Gilmore Street and waterline D on Sacramento Street. In Phase II, to be constructed under a subsequent grant application, the City proposes to replace waterlines CC, E and F. For phase I, approximately 3,700 feet of 8-inch and 12-inch replacement pipeline will be installed within existing road rights-of-way and utility easements. Replacing the waterlines will:

1. Increase water system efficiency by:
 - Reducing water losses and the City's total demand for raw water necessary to meet City customer demands.
 - Increasing water available for in stream and downstream uses.
2. Replacing infrastructure for long term water loss reduction and capacity optimization by:
 - Replacing aging infrastructure and adding looped pipelines for long term water loss reduction, improved water pressure and delivery rates.
 - Relocating infrastructure for better maintenance accessibility.
3. Improve reliability of water delivery for domestic and firefighting operations and public safety through:
 - Reducing the potential for catastrophic failures from aging infrastructure.
 - Increased pressures and reliability of operations for fire response demands.
 - Reductions in City peak operating demands.
 - Reduced cost of water system treatment and delivery.
4. Foster "headwater resilience" and climate change adaptive strategies through implementation of a project that:
 - Decreases the total energy used to treat City water supplies.
 - Lowers air quality impacts and greenhouse gas emissions associated with the energy used for treatment.
5. Protect surface water by:
 - Eliminating leaks, and reducing the risk of pipeline failure with associated soil erosion and potential sedimentation of nearby streams.

Through these simple actions of upgrading crucial water infrastructure in a source water area of statewide importance, the Project is increasing water supply reliability and the resilience of a vital headwater.

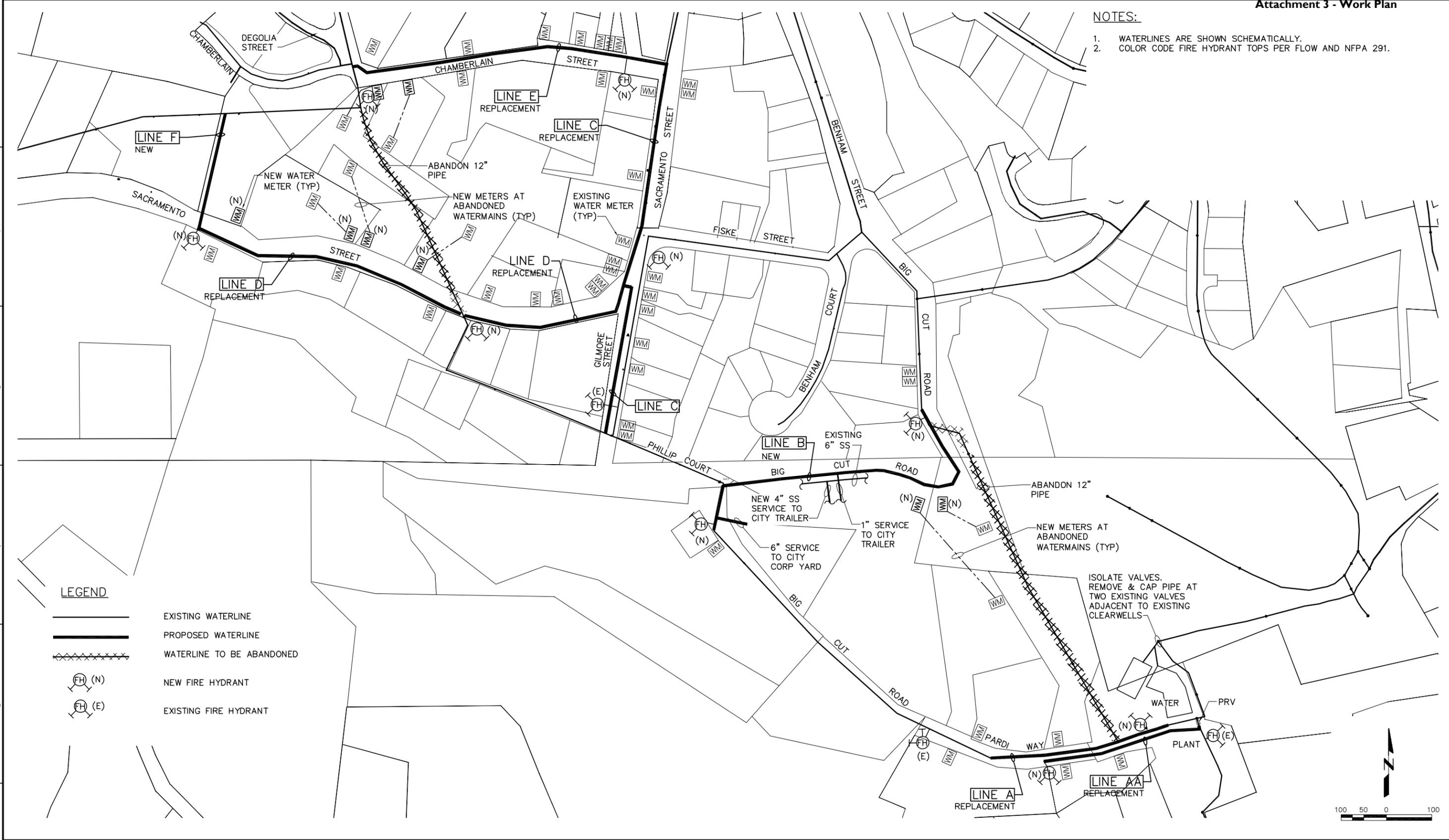


City of Placerville Waterline Replacement



NOTES:

1. WATERLINES ARE SHOWN SCHEMATICALLY.
2. COLOR CODE FIRE HYDRANT TOPS PER FLOW AND NFPA 291.



LEGEND

- EXISTING WATERLINE
- PROPOSED WATERLINE
- WATERLINE TO BE ABANDONED
- NEW FIRE HYDRANT
- EXISTING FIRE HYDRANT

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Rev	Date	By	Description

Designed
DWH
 Drawn
JAC/DWH
 Checked
SDH
 Job No.
6PLA1530



PSOMAS
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0" LINE IS 2" INCHES AT FULL SCALE
 IF LINE IS NOT 2" SCALE ACCORDINGLY

CITY OF PLACERVILLE
 PARDI WY/BIG CUT RD/SACRAMENTO ST
 WATERLINE REPLACEMENT PROJECT

OVERALL SITE PLAN
 PROPOSED WATERLINE IMPROVEMENTS

Scale
1"=100'-0"
 Drawing No.
 Sheet No.

PROJECT WORK TASKS

Budget Category (A) DIRECT PROJECT ADMINISTRATION

Task 1: Direct Project Administration

Subtask 1.1: Administration and Management

The objective of this task is to keep the project on time and within budget, keep all participants informed of project progress and status of deliverables, establish and maintain reliable and accurate billing and recordkeeping ensure that all requirements of the agreement with the DWR are met, and generally ensure smooth project implementation. The tasks for this budget category will comprise all non-construction project administration activities performed by the City of Placerville and CABY staff throughout the duration of the project and will include: development and completion of contractual paperwork, maintenance and reporting of expense documentation, oversight of project scheduling and contract/agreement compliance, preparation of monthly invoices, and completion of the final invoice.

Subtask 1.2: Labor Compliance

The City will adhere to all labor compliance requirements.

Subtask 1.3: Reporting

The City will handle Project invoicing with the terms of the grant award. The tasks for this budget category will include all activities necessary to support quarterly reporting, monthly invoicing and associated status reports, quarterly status reporting to the CABY IRWMP-RWMP, and submittal of the final report. These activities will include: tracking of the specific status of each project task, documentation of task status in an easy-to-understand and track format, creation of quarterly financial reports for the project (including percent complete of project activities), and preparation of all necessary reports (including the final report) per the format stipulated in the DWR Grant Agreement.

Subtask 1.4: Develop Performance Measures and Monitoring Plan

The goal of this task is to describe the performance measures that the City will use to quantify and verify project performance. The City will develop a Monitoring Plan that they will use to verify project performance with respect to the project benefits or objectives identified in the Proposal. A discussion of how the City will use monitoring data to measure the performance in meeting the overall goals and objectives of the IRWM Plan will be included in the Plan. Attachment 7 Monitoring, Assessment and Performance Measures, presents the planned project monitoring, assessment, and performance measures that will demonstrate that the Proposal will meet its intended goals, achieve measurable outcomes, and provide value to the State of California.

Subtask 1.5: Coordination with partner agencies and organizations

The City will be the sole recipient of the grant funds. The City will continue to coordinate with CABY and the Sierra Fund for quarterly and annual reports.

Task	Task Title	Deliverables
1	Direct Project Administration	
1.1	Administration and Management	<ul style="list-style-type: none"> • Invoices as required • Accessible and Accurate records
1.2	Labor Compliance	<ul style="list-style-type: none"> • Adherence to Labor Code Compliance through Board policies, administrative regulations and contracting procedures and documents.
1.3	Reporting	<ul style="list-style-type: none"> • Monthly Invoices and Reports • Quarterly, Annual and Final Reports to the Sierra Fund • Reports to CABY
1.4	Develop Performance Measures and Monitoring Plan	<ul style="list-style-type: none"> • Project Specific Performance Measures and Monitoring Plan
1.5	Coordination with partners	<ul style="list-style-type: none"> • Coordination with CABY and the Sierra Fund

Budget Category (B)
LAND PURCHASE/EASEMENT

Task 2: Land Purchase/Easement (N/A)

Task	Task Title	Deliverables
2	Land Purchase/Easement	N/A

Budget Category (C)
PLANNING/ DESIGN/ ENGINEERING/ ENVIRONMENTAL DOCUMENTATION

Task 3: Planning/Design/Engineering/Environmental Documentation

Subtask 3.1: Obtain Necessary Permits

The City will prepare and process applications for encroachment permits needed from Caltrans for pipeline construction activities that take place within Highway 49 easements. The City filed a CEQA Notice of Exemption with the El Dorado County Clerk on June 26, 2012.

Subtask 3.2: Engineering Documents

The City contracted with Psomas Engineering through a grant from the El Dorado County Water Agency to complete 95% engineering plans and specifications for the Project. The City will complete the remaining 5% for 100% engineering plans and specifications to move forward with project construction.

Task	Task Title	Deliverables
3	Planning/Design/Engineering/Environmental Documentation	
3.1	Obtain Necessary Permits	<ul style="list-style-type: none"> • Project Specific Encroachment Permits • Filed CEQA Documentation
3.2	Engineering Documents	<ul style="list-style-type: none"> • 100% Engineering Plans and Specification Documents

Budget Category (D)
CONSTRUCTION/IMPLEMENTATION

Task 4: Construction Implementation**Subtask 4.1: Pre-Construction Contracting**

The City will prepare a construction bid package for advertisement to procure a Construction Contractor using public bidding procedures. The City has established procedures and protocols for advertising, opening, and evaluating bids for construction services, as well as for awarding and developing contracts with construction companies. These policies and procedures will be used to identify the construction contractor from the pool of bidders. Pre-construction activities include, but are not limited to: developing technical specifications to support publication of the bid materials, a pre-bid meeting to respond to contractor questions (as required), review of submitted materials for completeness and qualifications/experience, and award of the contract in accordance with the applicable Public Contract Codes. The Final Design Drawings and Specifications for this project are 95% complete and are nearly ready to be released to bid.

Subtask 4.2: Project Construction

In accordance with Best Management Practices developed for the project, the selected Construction Contractor will arrange traffic control, fill and cap abandoned pipes and excavate and install new water lines. Approximately 3,700 feet of 8-inch and 12-inch replacement pipeline will be installed within existing road rights-of-way and utility easements. The trench lines will be backfilled according to geotechnical standards and a City Inspector will confirm all project activities. Generally, mobilization and site preparation will include: mobilization of equipment to the site, establishment of a staging area for materials and equipment, removal and replacement of fencing, site grading, and implementation of water pollution control. The City and the contractor will coordinate to ensure that all requirements for pre-construction staging are met.

Task	Task Title	Deliverables
4.	Construction Implementation	

4.1	Pre-Construction Contracting	<ul style="list-style-type: none"> • Advertisement for Bids; Pre-Bid Contractors Meeting: Contract Addenda, Bid Review Sheets, Awarded Contract • Notice To Proceed
4.2	Project Construction	<ul style="list-style-type: none"> • Installation, sanitization and testing of all required infrastructure • Waterline replacements completed • Final performance testing

Budget Category (E)
ENVIRONMENTAL COMPLIANCE/ MITIGATION/ ENHANCEMENT

Task 5: Environmental Compliance/Mitigation/Enhancement

Subtask 5.1: Environmental Compliance

The selected Construction Contractor will prepare an erosion control plan to ensure that soil exposed during project activities will not be transported if a rain event should occur during implementation. Before construction implementation, Construction Contractor will meet all NPDES permit program requirements. Construction Contractor will complete a Storm Water Pollution Prevention Plan and obtain a Notice of Intent to Discharge under the Regional Water Quality Control Board's California Construction General Permit regulations.

Task	Task Title	Deliverables
5.	Environmental Compliance/ Mitigation/Enhancement	
5.1	Environmental Compliance	<ul style="list-style-type: none"> • Erosion Control Plan • Storm Water Prevention Plan • Notice of Intent to Discharge

Budget Category (F)
CONSTRUCTION ADMINISTRATION

Task 6: Construction Administration

Subtask 6.1 Construction Administration

City staff will serve as construction managers for the project, as they have for similar projects successfully completed by the City. Supervision activities will include: ensuring implementation of pre-construction plans including coordination with appropriate agencies such as CHP and Caltrans, on-site observations and inspections, inspection of materials prior to installation, conducting construction progress meetings as

required, review of project status (percent complete versus percent spent), preparation and processing of change orders, review and approval of progress payments and recommendations for payment (as required), in-field problem solving, and other related activities.

Task	Task Title	Deliverables
6	Construction Administration	
6.1	Construction Administration	<ul style="list-style-type: none"> • Supervision and Documentation of all project construction activities • Customer notices and information releases • Coordinated Water systems operation during construction • Completion of Final report and As-Built Drawings • Storm Water Prevention Plan • Notice of Intent to Discharge

Budget Category (G)
OTHER COSTS

Task 7: Develop and Maintain CABY Project-Specific Webpage

Description: The goal of this task is to ensure that all CABY members and members of the public have access to updated and thorough information about the implementation and characteristics of the project. EID intends to provide this information through the maintenance of a webpage on the EID website that can be linked to the CABY website. Project progress reports, status updates, and other similar materials will be posted or linked to this webpage. The webpage will be designed and brought online (activated within the first month after contract agreement). The page will be updated periodically.

Task	Task Title	Deliverables
7.	Develop and Maintain CABY Project-Specific Webpage	
7.1	Develop and Maintain CABY Project-Specific Webpage	<ul style="list-style-type: none"> • Complete and updated webpage

Task 8: Data Management

The goal of this task is to ensure that all data gathered and developed as a result of the project is made available to state databases as well as CABY members and the interested public using data management and monitoring deliverables that are consistent with the IRWM Plan Standards and Guidance (as stipulated in the August 2010 IRWM Guidelines, page 20). In this case, the appropriate approach is identified in the CABY Planning Grant submittal, which will direct the IRWMP data collection efforts. Data will be made available to all CABY members and the general public through the existing CABY SWIM Database. Material will be

uploaded as it becomes available, however most of the data will be posted upon completion of the primary project activities. The CABY technical committee will evaluate project-related data to determine its appropriateness for upload to relevant state databases.

Task	Task Title	Deliverables
8.	Data Management	
8.1	Data Management	<ul style="list-style-type: none"> • Complete and updated data sets developed in response to the IRWM Program Data Management Guidelines • Submittal of project-specific data to all relevant databases

Budget Category (H)
CONSTRUCTION/IMPLEMENTATION CONTINGENCY

Task 9: Construction Contingency

Subtask 9.1 Construction Contingency

The City uses a 10% contingency factor for all construction projects. This formula will be applied to this contract and it will be the responsibility of the construction manager to identify situations in which the contingency funds may be accessed.