Summary of Water Resources Projects in El Dorado County for Considerations of Funding from the American Rescue Plan Act of 2021

A total of 13 projects are listed below, each with a brief summary.

1. El Dorado County, El Dorado County Fairgrounds Water Quality and Drainage Improvements Project $ 400,000

Summary: The County of El Dorado (County), El Dorado Water Agency (Agency), and the City of Placerville are leading the El Dorado County Fairgrounds (Fairgrounds) Water Quality and Drainage Improvements Project in consultation with the El Dorado County Fair Association. The Fairgrounds hosts a variety of events open to the public, but due to its topography and aging infrastructure, experiences occasional localized flooding that limits its ability to reliably use the facilities year round. In 2018, The County, Agency and City of Placerville collaboratively completed the West Slope Stormwater Resource Plan and identified the Fairgrounds project as one of the top priority projects. In 2020, the County and the Agency entered into an agreement to develop a feasibility study to provide long-term water quality and drainage improvement at the Fairgrounds. The feasibility study was completed in 2021 and identified alternatives for capturing stormwater to prevent the localized flooding and provide other potential beneficial uses. The preferred alternative, 3A, includes drainage improvements, development of a 9-acre-foot detention basin, and installation of green infrastructure features. Implementation of Alternative 3A will meet the project objectives of addressing localized flooding and water quality enhancement. Additionally, the green infrastructure features provide opportunities for community benefits (increased exposure to natural environment, reduced exposure to pollutants) at the Fairgrounds, and educational opportunities.

2. Tahoe City Public Utility District, Rubicon Tank 1 Water Feed Line Replacement Project

$75,000

Summary: The Rubicon Tank 1 Water Feed Line Replacement will replace approximately 275 feet of 6-inch water main with a 10-inch water main. The current 6 -inch water main serves as the common inlet/outlet from the Rubicon Tank No. 1. The current diameter of 6 inches is undersized to meet the higher flow demands of the Rubicon system. Increasing the diameter of this section of pipe will provide additional flow and pressure under high demand conditions such as fire flow. This Project is located on the west shore of Lake Tahoe in El Dorado County, south of Meeks Bay. Project benefits include increased drinking water service reliability and enhanced water for fire flow capacity. These benefits are critical to resolving issues of high flow demands in the Rubicon water system on the west shore of Lake Tahoe.

3. Tahoe City Public Utility District, Lower Meeks Bay Pressure Reducing Station $ 200,000

Summary: The Lower Meeks Bay Pressure Reducing Station Project (Project) will install approximately 600 feet of new 8-inch water main and a pressure reducing station (PRV) to supply the Meeks Bay Vista

pressure zone with a northerly feed of water. Currently, the Meeks Bay Vista pressure zone is fed from one PRV on the south end of the system. This PRV feeds water along the length of Meeks Bay Avenue which is approximately 5,700 feet in length. Due to the excessive length and existing pipe diameter of 6-inches, the system experiences severe head loss when fire flows are required on the northerly end of Meeks Bay Avenue. Providing a northerly connection will greatly improve fire flow at all hydrants along the length of Meeks Bay Avenue and will create a redundant connection in the event of a failure or maintenance of one PRV. This Project is located on the west shore of Lake Tahoe in El Dorado County, immediately south of Meeks Bay. Project benefits include increased drinking water service reliability and enhanced water for fire flow capacity. These benefits are critical to resolving issues adequate water for fire flows on the west shore of Lake Tahoe.

4. El Dorado Irrigation District, Sly Park Intertie Improvement $ 750,000

Summary: The existing SPI consists of 3.5 miles of 22-inch and 30-inch steel waterline that connects the Reservoir 1 Water Treatment Plant WTP in Pollock Pines and the Reservoir A WTP near Sly Park Reservoir. It was built under emergency drought conditions in 1978, just after the 1976-77 drought, to alleviate water shortages. The pipeline provides an intertie between the District's two major gravity supply sources (Project 184 Forebay and Sly Park Reservoirs) that together provide two thirds of the District's water supply to customers from Pollock Pines, a Disadvantaged Community and Qualified Census Tract (CTR), to El Dorado Hills. The pipeline has played a key role in insuring water supply deliver to thousands of people when one or the other of the two major supplies have been unavailable as a result of drought, and landslides or wildfire destroying raw water conveyance flumes and canals along the steep canyons of the South Fork of the American River. Since its construction in 1978, the unlined pipeline has corroded significantly. A lack of cathodic protection resulting in multiple leaks has forced the District to take the waterline out of service. However, increasing wildfire and landslide threats to Project 184 raw water conveyance and decreasing water supply yield due to climate change, make the need for the SPI more urgent. The results of the most current pipeline assessment are included in the Evaluation of Rehabilitation Alternative Technical Memorandum (2018). The technical memorandum recommends a complete replacement of the SPI with a 24-inch cement mortar lined and coated steel pipeline. The recommendation is primarily driven by the severely deteriorated condition of the pipeline and an annualized capital and operations/maintenance costs analysis of several rehabilitation and replacement alternatives.

5. El Dorado Irrigation District, Outingdale Dam Rehabilitation $ 440,000

Summary: The Outingdale Diversion Dam, located on the Middle Fork Cosumnes River, provides the only water source for the Outingdale community. Water diverted at the Dam pool is pumped, then treated and distributed to District customers. During late July 2021, streamflow receded to the point that diversions were no longer possible. Once streamflow receded to the point where water could no longer be diverted and most of the facility was in a dewatered state, the District conducted an inspection of the Dam. The inspection identified significant deterioration, which compromises the structural integrity and functionality of the Dam that warrants immediate action to maintain water supply reliability. The approach for rehabilitation is to encase much of the existing structure in steel reinforced concrete.

Where the new concrete will contact bedrock, the steel reinforcement will be doweled into bedrock. The encasement will consist of a 6-inch-thick concrete jacket that includes new reinforcing steel anchored into the existing structure. At the left and right abutments, the dam crest will be restored to its original height where previously damaged by large debris carried during flood flows. The steel reinforcement within the concrete jacket will make the dam more resilient to impact from debris, and steel angle iron placed along the edge of the crest will accomplish the same.

6. El Dorado County, South Upper Truckee Erosion Control Project $ 575,000

Summary: South Upper Truckee Erosion Control experiences chronic problems with discharge of sediment laden waters directly to the Upper Truckee River and commingling of freshwater flows with stormwater flows generated from within the subdivision. This commingled flow creates a directly connected conduit to the Upper Truckee River for all stormwater flows generated from within the Tahoe Paradise Unit 60 subdivision. The Tahoe Paradise Unit 60 subdivision was built in a historic Stream Environmental Zone. As a result, the road system modified drainage patterns and created a damming effect that ponds water on either side of South Upper Truckee Road. The main water quality problem in the neighborhood is that an ephemeral creek draining from Frog Pond near Echo Summit is routed through the subdivision via a flood control dike and channel system. This water is routed through the subdivision creating localized flooding and ponding. This problem was addressed in the past by the construction of a flood control dike and a series of conveyance channels to the Upper Truckee River. The Project will address the need for separation of waters to ensure stormwater within the subdivision can be treated using practices such as infiltration and detention.

7. Grizzly Flats Community Services District, Clearwell and Booster Pump Station Improvements $2,530,000

Summary:

8. Grizzly Flats Community Services District, Reservoir Lining Rehabilitation Project $ 300,000

Summary: South Upper Truckee Erosion Control experiences chronic problems

9. Tahoe City Public Utility District, Rubicon Wells 2&3 Backup Power Project $ 200,000

Summary: The Rubicon Wells 2&3 Backup Power Project will provide critical backup electrical power to water customers served by the District's Rubicon water system. Winter access can be difficult with accumulated snow and ice, making emergency response difficult during power outages. This Project includes the design and construction of a building to house a permanent generator to ensure water service is maintained during power outages. The new permanent generator will serve both if the District's Rubicon Wells, 2&3. This Project is located on the west shore of Lake Tahoe in El Dorado County, south of Meeks Bay. Project benefits include increased drinking water service and reliability.

These benefits are critical to resolving issues related to foreseeable power outages on the west shore of Lake Tahoe.

10. Tahoe City Public Utility District, West Lake Tahoe Regional Water Treatment Plant

$ 500,000

Summary: The West Lake Tahoe Regional Water Treatment Plant Project will provide a new domestic water treatment plant using Lake Tahoe surface water as its source. The Project will primary potable water service reliability and quality for the TCPUD's McKinney-Quail Water Service Area and redundant water supply for other water systems in the west Lake Tahoe region, including the Tahoe Cedars Water System in El Dorado County, by replacing an existing Interim Surface Water Treatment Plant. The Project site is located near the community of Tahoma on the west shore of Lake Tahoe. The Project includes construction of the treatment facility building, installation of a raw water pipeline generally along SR 89 to connect to the Electrical/Chemical Feed Room at Chambers Landing Beach, replacement of the water intake pipeline that draws water from Lake Tahoe, installation of submersible water intake pumps, and installation of the water intake pump station approximately 650 feet from the lakeshore. Project benefits include increased drinking water service and reliability, increased redundant water supply, and increased fire suppression capabilities. These benefits are critical to resolving issues related to a patchwork of disconnected water systems along the west shore of Lake Tahoe. The Project also addresses climate resiliency by supplying quality drinking from a secure surface water source (i.e. Lake Tahoe).

11. Georgetown Divide Public Utility District, Water System Conditions Assessment and Water System Reliability Study Update $ 50,000

Summary: In order to accomplish the GDPUD's asset management goals, multiple tasks have been, identified in a Work Plan that should be accomplished over the next several years. Some have been identified to be completed by GDPUD staff and others with consultant services. In an effort to phase the work, the first major consultant effort will focus on: 1) asset management planning; and 2) engineering analysis and evaluation of 25-30 miles of the raw water conveyance system, above the WTPs (Upcountry Ditch System and Main Ditch System), and the treated water system. A later phase will focus asset management planning and engineering analysis of the WTPs and raw water conveyance system below the WTPs (Kelsey and Pilot Hill Ditch System) and preparation of a water system asset management plan(s) that will include risk of failure assessments and a 20-year prioritized capital improvement projects list for both phases of work.

12. El Dorado County, Pioneer Trail Rehabilitation Project $1,600,000

Summary: The Pioneer Trail Rehabilitation is focused on improvements to Pioneer Trail and existing drainage inlets, catch basins, and ac dike conveyance systems. Flows from stormwater runoff are tributary to existing County maintained drainage facilities that take and infiltrate/treat runoff before leaving the system. Poor quality roadways have been found to be a large source of fine sediment pollutant loads which are a detriment to water quality. The project will focus on resurfacing of Pioneer

Trail from the El Dorado/City of South Lake Tahoe boundary to Glen Eagles Drive. Existing roadside conveyance systems (AC Dike) will be upgraded to allow for more efficient capture and transport of surface runoff.

13. Tahoe City Public Utility District, Tahoe Cedars Distribution Improvements $2,000,000

Summary: The Tahoe Cedars Distribution Improvements Project (Project) is a multi-phased project to reconstruct the Tahoe Cedars Water System in the Tahoma community on the west shore of Lake Tahoe in El Dorado County. This Project will address significant deficiencies in water reliability, water redundancy, and fire suppression capacity. This Project will replace/construct 79,300 linear feet of water mains, install 97 linear feet of new hydrant laterals and fire hydrants, and replace 62,400 linear feet of water service laterals. This Project will be designed, permitted, and completed in phases over 10-year construction seasons. Project benefits include increased drinking water service reliability and distribution, as well as enhanced water for fire flow capacity. These benefits are critical to resolving issues associated with the aging and deficient water system infrastructure in the Tahoe Cedars Water System.

OTHER ARPA PROJECT REQUESTS CONSIDERED

A. Georgetown Divide Public Utility District, Expansion of Raw Water Storage Capacity **$ 250,000**

Summary: In the event of a ditch failure and during periods of ditch maintenance GDPUD must rely on the raw water storage provided by the Walton Lakes, Greenwood and Auburn Lake Trails Reservoirs to supply the Auburn Lake Trails and the Walton Lakes Water Treatment Plants (WTP). Not less than 50 acre-feet of raw water storage should be provided upstream of the water treatment plants with not less than 25 acre-feet provided upstream of the Walton Lakes WTP and not less than 25 acre-feet provided upstream of the Auburn Lake Trails WTP.

Increasing the useable depth of Walton Lakes from approximately 8-1/2 feet to approximately 10 feet could increase the available storage at this site from approximately 14.0 acre-feet to approximately 24.7 acre-feet. Similarly, increasing the available storage capacity of Greenwood Reservoir from approximately 14.3 acre-feet to approximately 24.4 acre-feet could be accomplished by increasing the useable water storage depth from 7-1 /2 feet to 8-1 /2 feet.

The useable water storage depth at the Auburn Lake Trails Reservoir could also be increased to approximately 8 feet and storage capacity increased to approximately 9.6 acre-feet. In 1980, GDPUD conducted limited sediment removal from Walton Lakes. At that time approximately 4000 yd^3 (2.5 ac-ft) of sediment was removed from Walton Lakes. This work was conducted on a limited budget basis. After 20 years this amount of sediment together with additional dredging and excavation could be conducted to expand the existing capacity of this reservoir.

B. El Dorado Irrigation District, Camino Heights Disposal Upgrades **$ 200,000**

Summary: The Camino Heights Wastewater Treatment Plant (CHWWTP) treats wastewater for a small community of approximately 120 residents and a small commercial development in a Small Difficult Development Area south of Highway 50, in Camino CA. CHWWTP was originally constructed in 1964 and has undergone several upgrade projects to adhere to compliance requirements. Currently, the permitting capacity is 60,000 gpd and consists of influent screening, two aeration ponds, one storage pond, chlorine disinfection, and disposal via land application and sub-surface irrigation. Due to changing climate conditions, the CHWWTP has become increasingly affected by stormwater inflow. During the 2017 and 2019 storm events, CHWWTP became overwhelmed and District staff had to evacuate wastewater via Vactor trucks and transport to the Deer Creek Wastewater system in order to prevent pond overtopping and a sewer spill into Weber Creek. The site has undergone substantial site drainage improvements as well as disposal system optimization; however, this increase in storm impacts necessitates either additional effluent storage capacity or an alternate disposal method. District staff has been in regular contact with the Regional Water Quality Control Board regarding this issue and will

continue to work with this stakeholder and others to remedy the disposal concerns. At this time, feasible solutions are to install a storage tank to maintain system integrity during storm events or to eliminate this facility completely and install a gravity pipe to the City of Placerville's wastewater treatment facility.

C. El Dorado Irrigation District, Reservoir Tank 1 Upgrade $5,600,000

Summary: Reservoir 1 (2.8 million gallons) was initially constructed in 1960 as part of the original Reservoir 1 Water Treatment Plant (WTP). It not only serves as a finish water reservoir but is part of the disinfection process. In 1989 the reservoir was lined and covered with a Hypalon floating cover system. Floating-covered storage facilities require regular, on-going maintenance to ensure that the integrity of the structure is maintained over the membrane material service life. Due to the design of floating-covered storage, debris and precipitation gathers and puddles on the floating cover. The accumulation of both debris and precipitation must be removed to prevent the potential of cross contamination of the drinking water supply in the event of a floating cover breech. Although the District complies with drinking water standards, the Reservoir 1 liner/cover is at the end of its useful life, and its inspection, operations, and maintenance costs are increasing as the liner and cover age. The Reservoir 1 WTP currently provides water to approximately 31,000 people (7,617 residential connections times 2.8 people per connection plus City of Placerville) District customers from Pollock Pines to the Gold Hill area. Approximately 6,664 of these customers live within a Disadvantaged Community (Pollock Pines Place Name) and approximately 5,000 live within a Qualified Census Tracts in the Pollock Pines area. Given the number of people served, the condition and age of the liner, and the reservoir's importance in the treatment process, specifically in meeting contact time for disinfection and pathogen deactivation, the District is evaluating options for replacing the existing Reservoir 1 liner and cover with two concrete or steel tanks (one for disinfection and one for equalization).

D. El Dorado Irrigation District, Pollock Pines Waterline Replacements $5,000,000

Summary: The project will replace multiple 4-inch, 6-inch, and 8-inch diameter steel and asbestos cement pipes that deliver potable water to approximately 6,664 residents within the Disadvantaged Community (DAC) and Qualified Census Tract (CTR) of Pollock Pines that are susceptible to water loss and outages due to extensive leaks. The project will replace these pipelines with ductile iron pipe, which has historically provided the longest service life with minimal maintenance within the District. The District's waterline replacement program consists of targeted replacement of leaking waterlines. Replacing leaking and substandard waterlines in the distribution system will reduce the potential for contamination of the drinking water supply, increase system reliability, reduce maintenance expenditures, provide additional wildfire protection, and reduce energy expenditures by reducing water losses. Replacing these waterlines will reduce system water loss from leaks and breaks which was previously estimated to be approximately 13.7 million gallons per year. Pipeline projects are prioritized with District operations and engineering staff based on frequency of leaks and costs of repairs. Higher priority will be given to high-leak prone areas, and locations where undersized distribution lines are providing low pressure to District customers. Project locations and scope are subject to change as maintenance records are reviewed, and an engineered design proceeds.

E. El Dorado County, Pioneer Trail / US Highway 50 Intersection Safety Improvement Project $3,000,000

Summary: The proposed project would remove the four existing traffic signals at the US 50/Pioneer Trail intersection and replace the intersection with a three-leg modern roundabout. The roundabout would include standard roundabout geometric features such as shared-use paths, crosswalks, splitter islands, truck apron with central island, and landscape buffer between the circulatory roadway and shared-use path. The project would also construct permanent site drainage improvements to protect water quality, including rolled curb and gutter, catch basins, culverts, and an infiltration basin. Once constructed, the project would improve safety and mobility for all modes of travel, reduce reliance on private automobiles, provide multimodal transportation improvements like visible crosswalks and a shared-use path for pedestrian and bicycle movements, provide water quality improvements within the project limits, and provide opportunities to experience Meyers as a pedestrian or cyclist. Funds received through this grant application process would be used towards the development, design, and construction of water quality improvements.

PROJECT	AGENCY	Status	ARPA Project Level	Start Date	End Date	Permitting	DAC/EDA	Use for Matching Funds	Encourage Strong Labor	SRF	SDWA	US Treas Recm'd Criteria	Population Served
El Dorado County Fairgrounds Water Quality and Drainage Improvements Project	El Dorado County Planning & Building Department	Feasibility Study	Pre-Design (to "Shovel Ready")	Mar-22	Jun-22	CEQA, NEPA, Grading/Building Permits, USACE Section 404; Section 1600 permit; MS4 Permits	Y	Y	Y	X		X	267,000
Rubicon Tank 1 Water Feed Line Replacement	Tahoe City Public Utility District	Design	Construction	Sep-21	Oct-22	CEQA NOE	N	N	Y		X	X	150
Lower Meeks Bay Pressure Reducing Station	Tahoe City Public Utility District	Design	Construction	Sep-21	Sep-22	CEQA NOE	N	N	Y		X	X	620
Sly Park Intertie Improvement	El Dorado Irrigation District	Pre-Design	Design	Jan-22	Oct-24	CWA 401; 1602 Streambed Alt.; NHPA Sect 106	Y	Y	Y		X	X	123,000
Outingdale Dam Rehabilitation	El Dorado Irrigation District	Pre-Design	Construction	Aug-21	Oct-22	CEQA Mit NegDec	Y	N	Y		X	X	560
South Upper Truckee Erosion Control Project	ED-DOT	Planning	Construction	Sep-25	Jun-25	TRPA; RWQCB; USFS Special Use;			Y			X	14,000
Clearwell and Booster Pump Station Reliabiity Improvements	GFCSD	Pre-design	Construction	Dec-21	Sep-23	CEQA Mit NegDec	Y	N	Y		X	X	1,200
Reservoir Lining Rehabilitation	GFCSD	Pre-Design	Construction	Apr-22	Apr-24	CEQA Mit NegDec	Y	N	Y		X	X	1,200
Rubicon Wells 2&3 Backup Power Project	Tahoe City Public Utility District	Design	Construction	Sep-21	Oct-23	CEQA NOE; Caltrans encroachment; EDC encroachment	N	N	Y		X	X	620
West Lake Tahoe Regional Water Treatment Plant	Tahoe City Public Utility District	Construction	Construction	Feb-24	Feb-24	Army Corp of Engineers; Caltrans; CA Dept Fish and Wildlife; Lahontan; Tahoe Regional Planning Agency; State Water Board	Y	Unknown	Y		X	X	2,500
Water System Conditions Assessment and Water System Reliability Study Update	Georgetown Divide Public Utility District	Planning	Design	May-22	May-23	N/A	Y	Unknown	Y		X	X	9,500
									Y			X	
Pioneer Trail Rehabilitation Project	ED-DOT	Conceptual	Construction	Jan-23	Dec-24	TRPA Permit						X	22,000
Tahoe Cedars Distribution Improvements	Tahoe City PUD	Planning	Construction	Sep-21	Dec-26	CEQA NOE; Caltrans encroachment; EDC encroachment	Y	Y	Y		X	X	1,444
Expansion of Raw Water Storage Capacity	GDPUD	Conceptual	Design	Oct-22	Dec-22	CEQA	Y				X	X	9,500
Camino Heights Disposal Upgrades	El Dorado Irrigation Distrct	Planning	Construction	Jan-25	Jan-25	CWA 401	N	Unknown		X		X	120
Reservoir 1 Tank Upgrade	El Dorado Irrigation District	Pre-Design	Design	Jul-21	Oct-24	CEQA Mit NegDec	Y	Y			X	X	31,000
Pollock Pines Waterline Replacements	El Dorado Irrigation District	Pre-Design	Construction	Jan-22	Dec-24	CEQA Mit NegDec	Y	Y			X	X	123,000
Pioneer Trail / US Highway 50 Intersection Safety Improvement Project	ED-DOT	Pre-Design	Construction	Jan-18	Jan-23	TRPA; RWQCB; CalTrans Encroach.							22,000