Project Description Form

Project/Program Name	*Biomass Plant-Union Mine*		
Responsible Agency	TBD		
Partner Agency (ies)	Environmental Management, CAO Office		
Net Yield	**Normal Year:** NA	**Wet Year:** NA	**Dry Year:** NA
Estimated Cost	**Capital:** NA	**O&M:** NA	**Energy:** NA
Unit Cost	*NA*		
Site Coordinates (Approximate)	**Latitude:** 38.646686°	**Longitude:** -120.827125°	

Description

(Provide a high level description of project including funding history/sources/strategy, consequences if project does not happen etc.)

This project would explore a way to save water by delving into the biomass industry. Biomass is anything organic burned or fermented (ex. Sludge) to create gas or fuel. The steam it produces can operate machine engines and when cooled is clean water that can be re-heated for continued use. El Dorado County operates a septage plant at their Union Mine Property. PJ Patton talked with the plant manager and learned that the water from human waste is cleaned and used in the sludge fields with the rest being released in Deer Creek for use by EID. The sludge from the plant is eventually dried and transported out of the county. The Union Mine Plant currently pays over $100,000 annually for electricity. Consequently, an idea has been formulated to build a biomass plant on the County property by the Union Mine Plant. This plant would take in waste from the National Forest, the County Ag industry, current homeowners and the septage plant, produce electricity for the plant and sell the rest to either SMUD or PGE. One leg of this idea may be working with Sierra Pacific Industries to re-open the Camino Mill for the purpose of chipping forestry waste for the biomass plant. Another leg of this idea would be to work with the energy providers in Northern California to add infrastructure to receive the excess energy the biomass plant generates. It should also be stated that the Environmental Management Department of the County has a closed dump area in South Lake Tahoe that might also be a great location for a Biomass Plant.

Component

Watershed Management

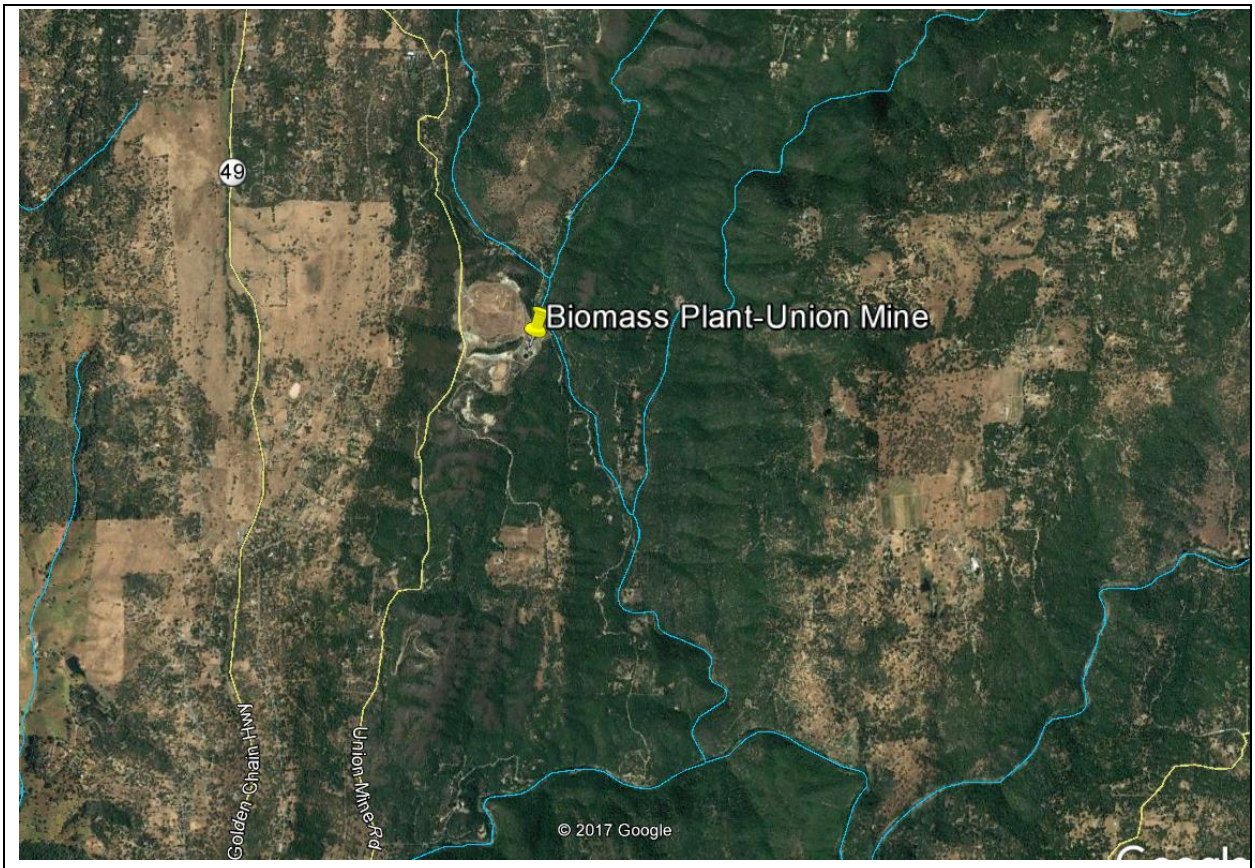
Potential Challenges

(List challenges in bullets)

- Intergovernmental cooperation (Fed, State, County)
- Funding

Conceptual GIS Map of Site

Union Mine Septage Plant, Google Earth image provided with approximate location of project site



Purpose(s)	Key Stakeholders
☒ Improve in-stream water quality ☐ Improve health of local watersheds ☒ Improve local water supply reliability ☐ Implement & monitor a reliable stormwater system ☐ Increase climate resilience ☒ Increase community awareness for sustainable water	*(List key stakeholders)* EID, County, PGE, Forestry Dept, MERF

Stage of Development

☒ Conceptual	☐ Planning	☐ Pre-Design
☐ Design	☐ Construction	☐ Other

Notes on Stage of Development

Expected Project Timeline	*Near or long-term (approximate years to implement).* 5 to 10 years
Project Triggers	*What would cause this project to justify immediate implementation (e.g., flow rate, funding opportunity)?* Flow Rate and/or funding opportunity

Potentially Applicable Federal and State Programs for Technical and Financial Assistance

- TBD

Stormwater Multi-Benefits (per SWRP Guidelines Table 4):

Primary Opportunity (highlight applicable cells and provide justification below table)

Benefit Category	Main Benefit	Additional Benefit
Water Quality *while contributing to compliance with applicable permit and/or TMDL requirements*	Increased filtration and/or treatment of runoff	Nonpoint source pollution control
		Reestablished natural water drainage and treatment
Water Supply *through groundwater management and/or runoff capture and use*	Water supply reliability	Water conservation
	Conjunctive use	
Flood Management	Decrease flood risk by reducing runoff rate and/or volume	Reduced sanitary sewer overflows
Environmental	Environmental and habitat protection and improvement including: -Wetland enhancement/creation; -Riparian enhancement; and/or -Instream flow improvement	Reduced energy use, GHG emission, or provides a carbon sink
		Reestablishment of the natural hydrograph
	Increased urban green space	Water temperature improvements
Community	Employment opportunities provided	Community involvement
	Public education	Enhance and/or create recreational and public use areas
		Environmental Justice (Additional Benefit added for project evaluation)

(##) List details supporting why this project will achieve the highlighted benefit.

This project will comply with water quality standards, and contribute towards reducing nonpoint source pollution. Additionally, the proposed project has the potential to increase water supply reliability and promote water conservation because when the steamed that is generated is cooled, it becomes clean water that can be reused. Biomass plants do not currently exist in El Dorado County, as such the development of a biomass plant in the county would trigger the curiosity of the community. As a result, the curiosity of the community could be used to educate them and teach them on biomass energy and integrated water resources management. This project would ultimately engage the involvement of the community and create job opportunities with the creation of this facility. With the construction of the biomass plant this project will create job opportunities during the construction phase and would eventually need a group of people to run the facility. Since a biomass plant is being proposed, the plant will help reduce greenhouse emissions. In addition, because the plant would be taking in waste to generate energy, the amount of waste that would end up in local water bodies will be reduced. Consequently, the reduction of constituents and unwanted waste in the watershed will help improve the environment and local habitats.

Project Included in IRWM:	☐ Yes, which one_____ ☒ No, explain_project is in conceptual stage, not added to IRWM currently__
Project Benefits a DAC/EDA[1]:	☐ Yes, which one_____ ☐ No

CEQA Compliance:	☐ Yes, explain_____ ☒ No, explain_project is in conceptual stage, no environmental documentation completed yet__

Contact Person(s):

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- PJ Patton, EDCWA Fiscal Assistant, pamela.patton@edcgov.us, (530) 621-6673

Key References:

- IER Institute for Energy Research: Impact of EPA's Regulatory Assault on Power Plants: New Regulations to Take More than 72 GW of Electricity Generation Offline and the Plant Closing Announcements Keep Coming…
- 2016 Annual Technology Baseline (ATB) PowerPoint, September 2016

Supplemental Information (e.g., Project Webpage or equivalent):

- Biomass for Electricity Generation, online article by the US Department of Energy, http://wbdg.org/resources/biomass-electricity-generation#intro

[1]DAC = Disadvantaged Communities
EDA = Economically Distressed Area