WATER SUPPLY PROJECTS

II. ENVIRONMENTAL IMPACT AND MANAGEMENT PLAN

Possible Environmental/Social Impacts	Baseline Environment	Preventive/Mitigating Measures	Monitoring Parameters/ Implementation	REMARKS
		☑ Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost		
LAND				
☑ Consistency with land use	Current land use w/in 1km radius (as per zoning ordinance): ☐ Residential ☐ Commercial/ Institutional ☐ Industrial ☐ Agricultural/ Recreational ☐ Protected Areas ☐ Others, specify Actual land uses w/in 1km radius: ☐ Residential ☐ Commercial/ Institutional ☐ Industrial ☐ Agricultural/ Recreational ☐ Protected Areas ☐ Others, specify	☑ See attached proof of compatibility with land use		

Possible Environmental/Social Impacts	Baseline Environment	Preventive/Mitigating Measures	Monitoring Parameters/ Implementation	REMARKS
		☑ Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost		
☑ Disturbance to wildlife due to vegetation clearing	Existing vegetation in the area: ☐ Forestland ☐ Marshland ☐ Grassland ☐ Mangrove ☐ Wetland ☐ Others, specify	☑ Comply with conditions of DENR/LGU SLUP, Tree Cutting Permit, ROW, PCA Permit ☑ Limit land clearing as much as possible ☑ Provide temporary fencing for vegetation that will be retained ☑ Promote restoration of damaged or destroyed vegetation where possible (e.g., tree planting)	☑ Annual inspection of area replanted/ re-vegetated	
☐ Change in surface landform/ topography/ terrain/slope ☐ Soil Erosion	Slope: ☐ Flat (0-3%) ☐ Gently sloping to rolling (3-18%) ☐ Steep (>18%) Is the project site located in an area identified by MGB/PAG-ASA/ PHIVOLCS as hazard prone? ☐ Yes ☐ No	☐ Provide erosion control and slope protection measures ☐ Designate a Spoils Storage Area, with topsoil set aside for later use and allow maximum re-use of spoils ☐ Construct during dry season or other soil cover ☐ Others, specify ☐ Comply with the DENR Administrative Order No. 2003-30 and DENR Administrative Order No. 2000-28, Implementing Guidelines on Engineering Geological and Geo-	☐ Regular inspection of slope protection measures in erosion- prone areas ☐ Regular inspection for new eroded areas near the site ☐ Others, specify	

Possible Environmental/Social Impacts	Baseline Environment	Preventive/Mitigating Measures ☑ Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost	Monitoring Parameters/ Implementation	REMARKS
		hazard Assessment (EGGA).		
☑ Soil/Land contamination due to improper solid waste disposal	Existing soil type in the area: ☐ sandy ☐ clay ☐ sandy-loam ☐ Others, specify	☑ Implement the Ecological Solid Waste Management Plan (ESWMP) ☐ Set up temporary fence around the construction area ☑ Implement re-use and recycling of waste materials ☑ Implement proper segregation, collection and disposal of domestic wastes in designated areas ☐ Implement proper collection, labeling and storage of hazardous waste ☑ Provide receptacles / bins for solid wastes ☐ Coordinate with the municipal / city waste collectors ☐ Engage third party company for waste collection ☐ Others, specify	☑ Daily inspection of waste/recycling bins for segregation ☑ Daily inspection for presence of mixed garbage in the facility ☑ Weekly Inspection of waste accumulated ☐ Others, specify	

Possible Environmental/Social Impacts	Baseline Environment	Preventive/Mitigating Measures	Monitoring Parameters/ Implementation	REMARKS
		☑ Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost		
☐ Impairment of visual aesthetics ☐ Devaluation of land values	Presence of visually significant Landforms/landscape/structures ? ☐ Yes ☐ No	☐ Implement landscaping and other beautification measures ☐ Provide adequate buffer ☐ Compensate adjacent property owners ☐ Others, specify	☐ Regular inspection of landscaping and other beautification activities ☐ Regular monitoring of buffer zones ☑ Regular monitoring for presence/absence of complaints from adjacent property owners	
WATER				
☐ Competition in water use ☐ Depletion of water resources	Size of population using receiving surface water: ☐ ≤ 1,000 persons ☐ >1,000 and ≤ 5,000 persons ☐ >5,000 persons Available/nearest water source. ☐ Deep well ☐ Water district/LGU ☐ Surface water ☐ Others, specify	☐ Implement rainwater harvesting and similar measures as an alternative source of water ☑ Observe water conservation measures; ☑ Careful selection of project site to avoid disruption of traditional water uses ☑ Obtain Water Permit from NWRB ☑ Improve efficiency of water supply and distribution system ☐ Implement community ponds and similar measures as alternative ☐ water source for non-domestic uses	☐ Regular monitoring for presence/absence of complaints ☑ Regular coordination with concerned agencies ☑ Regular monitoring for occurrences of water shortages ☐ Others, specify	

Possible Environmental/Social Impacts	Baseline Environment	Preventive/Mitigating Measures ☑ Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost	Monitoring Parameters/ Implementation	REMARKS
		☐ Increase, when practical, storage capacities of water supply structures ☐ for resilience to greater climate variations and extremes ☐ Others, specify		
☐ Increased occurrence of flooding	Is the project site located in an Area identified by MGB/PAG-ASA as flood prone? ☐ Yes ☐ No	☐ Use appropriate design for project facilities ☐ Implement appropriate drainage system ☐ Regularly remove debris and other materials that may obstruct water flow ☐ Use appropriate technology (e.g., raised hand-pumps) to protect drinking water from flood ☐ contamination ☐ Others, specify	☑ Regular monitoring for presence/absence of complaints ☑ Regular coordination with concerned agencies ☑ Regular monitoring for increased frequency of flooding ☐ Others, specify	

Possible Environmental/Social Impacts	Baseline Environment	Preventive/Mitigating Measures	Monitoring Parameters/ Implementation	REMARKS
		☑ Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost		
AIR / NOISE				
☐ Air quality degradation	Distance to nearest community: ☐ 0 to less than 0.5 km ☐ 0.5 to 1 km ☐ More than 1 km	☐ Properly operate and maintain all emission sources (e.g. vehicles, pumps, generator, etc) ☐ Install, when applicable, the appropriate air pollution control device/s ☐ Strictly enforce good housekeeping practices ☐ Control vehicle speed to lessen suspension of road dust ☐ Conduct water spraying to suppress dust sources and minimize discomfort to nearby residents ☐ Use covered vehicles to deliver materials that may generate dust ☐ Others, Specify	☑ Regular monitoring for presence/absence of complaints Regular (ocular) inspection of: ☐ Absence of white or black smoke from vehicles, generator, etc. ☐ Presence of truck cover during deliveries	
☐ Nuisance due to noise generation	Distance to nearest community: ☐ 0 to less than 0.5 km ☐ 0.5 to 1 km ☐ More than 1 km	☐ Properly operate and maintain all noise sources (e.g., vehicles, pumps, generator, etc.) ☐ Install, when applicable, the appropriate noise control device/s	☑ Regular monitoring for presence/absence of complaints ☐ Regular monitoring of buffer zones	

Possible Environmental/Social Impacts	Baseline Environment	Preventive/Mitigating Measures ☑ Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost	Monitoring Parameters/ Implementation ☑ Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost	REMARKS
		(e.g., mufflers, silencer, sound barriers, etc.) ☐ Implement appropriate operating hours ☐ Provide adequate buffer and/or planting trees ☐ Others, specify		
PEOPLE				
☐ Displacement of residents in the project site and within its vicinity ☐ Displacement of Indigenous Peoples ☐ Enhanced employment and/or livelihood opportunities ☐ Reduced employment and/or livelihood opportunities ☐ Increased revenues for LGU ☐ Disruption/ Competition in delivery of public services (e.g., education, peace	Size of population of host barangay: ☐ ≤ 1,000 persons ☐ >1,000 and ≤ 5,000 persons ☐ >5,000 persons Classification of host barangay: ☐ Urban ☐ Rural Available services within/near the host barangay: ☐ Schools (e.g., elementary, high school, college)	☐ Provide relocation/disturbance compensation packages ☑ Prioritize local residents for employment ☑ Promptly pay local taxes and other financial obligations ☑ Regular coordination with LGU ☐ Conduct prior consultation and coordination to minimize disruption of daily domestic activities and to ensure respect for IP rights and cultural practices ☐ Ensure participation of IPs in consultations and dialogues ☐ Provide appropriate traffic/warning signs, lighting,	☑ Regular monitoring for presence/absence of complaints ☑ Regular coordination with LGU ☐ Others, specify	

Possible Environmental/Social Impacts	Baseline Environment	Preventive/Mitigating Measures	Monitoring Parameters/ Implementation	REMARKS
		☑ Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost		
and order, etc.) ☐ Enhanced delivery of public services (e.g., education, peace and order, etc.) ☐ Increase in traffic volume and worsening of traffic flow	☐ Health facilities (e.g., clinics, hospitals, etc.) ☐ Peace and order (e.g., police outpost, Brgy. Tanod, etc.) ☐ Recreation and sports facilities ☐ Others, specify	etc. ☐ Others, specify		
☑ Impacts on community health and safety ☐ Others, specify		☑ Regularly coordinate with LGU ☑ Maintain the integrity of the pipeline system ☐ Provide appropriate warning signs, lighting and barricades, whenever practicable ☐ Observe proper housekeeping ☐ Provide on-site medical services for any emergency. ☐ Participate in public awareness programs on health and safety ☐ Implement appropriate safety programs for both community and workers ☑ Strictly comply with fire, safety and similar regulatory requirements	☑ Regular monitoring for presence/absence of complaints ☑ Regular monitoring of the following for water portability: ☐ pH ☐ TSS concentration ☐ Total Coliform ☐ Color ☑ Regular submission of reports to concerned agency ☐ Others, specify	

Possible Environmental/Social Impacts	Baseline Environment	Preventive/Mitigating Measures	Monitoring Parameters/ Implementation	REMARKS
		☑ Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost		
		☐ Strictly Comply with requirements of RA 6969 ☐ Others, Specify		