

WATER SUPPLY PROJECTS

II. ENVIRONMENTAL IMPACT AND MANAGEMENT PLAN

Possible Environmental/Social Impacts	Baseline Environment	Preventive/Mitigating Measures	Monitoring Parameters/Implementation	REMARKS
		<input checked="" type="checkbox"/> Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost		
LAND				
<input checked="" type="checkbox"/> Consistency with land use	<p>Current land use w/in 1km radius (as per zoning ordinance):</p> <div style="margin-left: 20px;"> <input type="checkbox"/> Residential <input type="checkbox"/> Commercial/ Institutional <input type="checkbox"/> Industrial <input type="checkbox"/> Agricultural/ Recreational <input type="checkbox"/> Protected Areas <input type="checkbox"/> Others, specify </div> <p>Actual land uses w/in 1km radius:</p> <div style="margin-left: 20px;"> <input type="checkbox"/> Residential <input type="checkbox"/> Commercial/ Institutional <input type="checkbox"/> Industrial <input type="checkbox"/> Agricultural/ Recreational <input type="checkbox"/> Protected Areas <input type="checkbox"/> Others, specify </div>	<input checked="" type="checkbox"/> See attached proof of compatibility with land use		

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

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

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

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		<input checked="" type="checkbox"/> Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost		
		<div><input type="checkbox"/> Increase, when practical, storage capacities of water supply structures</div> <div><input type="checkbox"/> for resilience to greater climate variations and extremes</div> <div><input type="checkbox"/> Others, specify</div>		
<div><input type="checkbox"/> Increased occurrence of flooding</div>	<div>Is the project site located in an Area identified by MGB/PAG-ASA as flood prone?</div> <div><div><input type="checkbox"/> Yes</div><div><input type="checkbox"/> No</div></div>	<div><input type="checkbox"/> Use appropriate design for project facilities</div> <div><input type="checkbox"/> Implement appropriate drainage system</div> <div><input type="checkbox"/> Regularly remove debris and other materials that may obstruct water flow</div> <div><input type="checkbox"/> Use appropriate technology (e.g., raised hand-pumps) to protect drinking water from flood</div> <div><input type="checkbox"/> contamination</div> <div><input type="checkbox"/> Others, specify</div>	<div><input checked="" type="checkbox"/> Regular monitoring for presence/absence of complaints</div> <div><input checked="" type="checkbox"/> Regular coordination with concerned agencies</div> <div><input checked="" type="checkbox"/> Regular monitoring for increased frequency of flooding</div> <div><input type="checkbox"/> Others, specify</div>	

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

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

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

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		<input checked="" type="checkbox"/> Cost of preventive/mitigating as well as monitoring integrated in the construction /operation cost		
		<div><input type="checkbox"/> Strictly Comply with requirements of RA 6969</div> <div><input type="checkbox"/> Others, Specify</div>		