Feasibility Study and Detailed Designs for the Development of the Millet Intake within the John Compton Dam Raw Water Supply System

Environmental and Social Management Plan – *Revised*

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Acronyms

CARPHA .....Caribbean Public Health Authority

DCA .....Development Control Authority

DIPE .....Department of Infrastructure, Ports, Energy, and Labour

DVRP .....Disaster Vulnerability Reduction Project

ESHS .....Environmental Social Health and Safety

ESIA .....Environmental and Social Impact Assessment

ESMP .....Environmental and Social Management Plan

GOSL.....Government of Saint Lucia

JCD.....John Compton Dam

LD .....Labour Department

LUCELEC .....Saint Lucia Electricity Services Limited

MAFPPNRC.....Ministry of Agriculture, Fisheries, Physical Planning, Natural Resources and Cooperatives

MDC .....Millet Development Committee

MHW .....Ministry of Health and Wellness

MIPEL .....Ministry of Infrastructure, Ports, Energy, and Labour

MISP .....Management Strategies and Implementation Plans

NTU .....Nephelometric Turbidity Unit

OP.....Operational Policies

PAP .....Project Affected Persons

PCU.....Project Coordinating Unit

SLSWMA.....Saint Lucia Solid Waste Management Authority

TORs .....Terms of Reference

WASCO .....Water and Sewerage Company Inc.

WB.....World Bank

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1.0 Introduction

The Government of Saint Lucia (GOSL) obtained assistance from the World Bank (WB) towards the financing of the Disaster Vulnerability Reduction Project (DVRP). The DVRP is aimed at reducing the country's vulnerability to natural hazards and climate change impacts such as more intense hurricanes and storm events. This wider project is being implemented by the Department of Economic Development, Transport and Civil Aviation through the Project Coordination Unit (PCU).

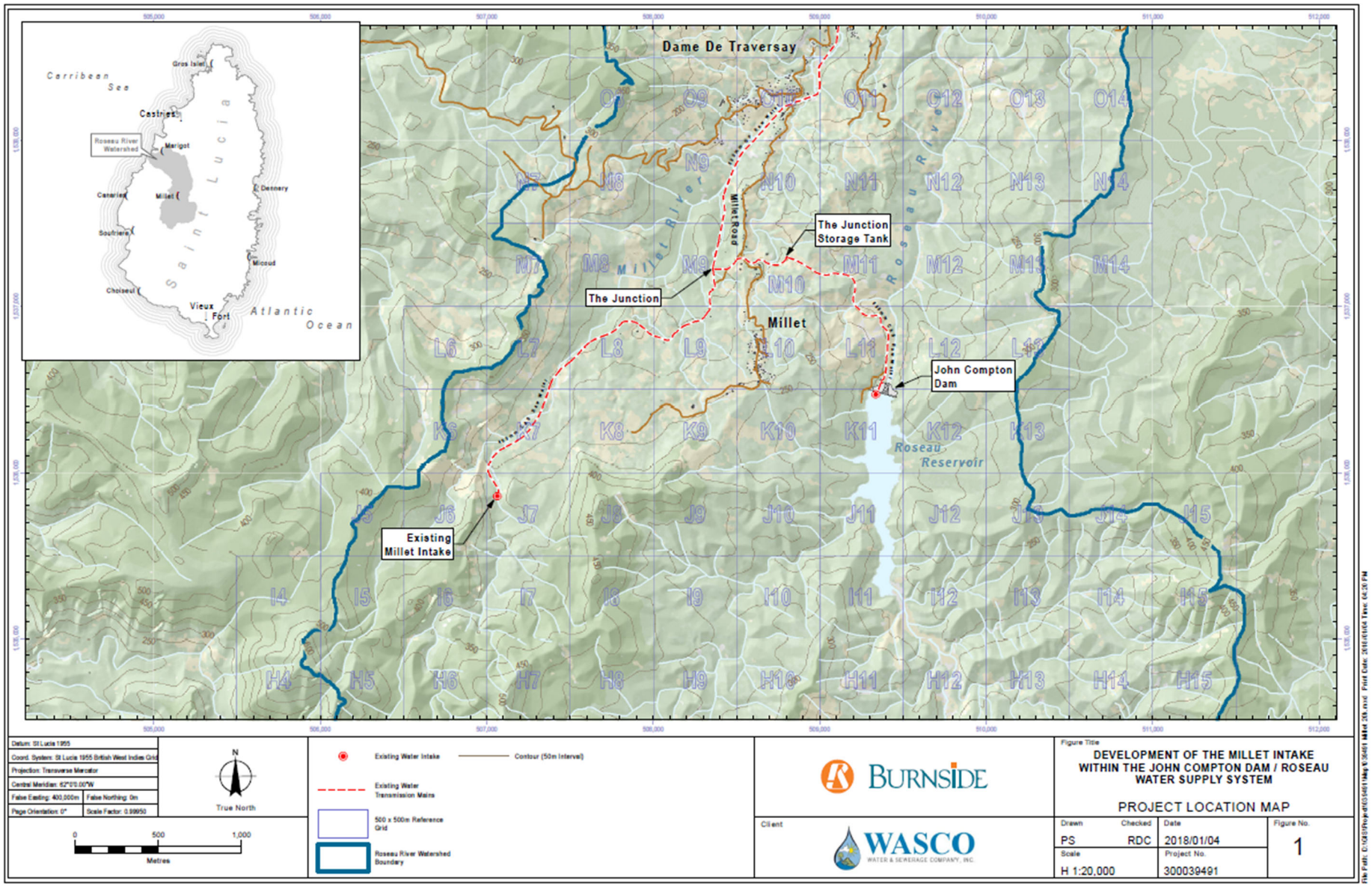
The Millet raw water intake and pipeline at Millet in Anse la Raye, in conjunction with the supply from the John Compton Dam, is managed by the Water and Sewerage Company Incorporated (WASCO), and contributes to the provision of potable water supply to the north of the island. This intake and pipeline were severely damaged by Hurricane Tomas in 2010, and later by subsequent storm events. The Water and Sewerage Company Incorporated which manages the island's water supply has identified the reconstruction of this Millet Intake as a priority and is the technical implementation agency responsible for coordinating and managing this reconstruction project under the DVRP. The location of the Project area is shown below in Figure 1 – Project Location Map.

As a precursor to the reconstruction, WASCO undertook a feasibility study which included a number of studies, along with the preparation of detailed designs for the redevelopment of the Millet Intake. An Environmental and Social impact assessment (ESIA) and Environmental and Social Management Plan (ESMP) as part of this wider study along with a number of other inter-related studies prepared under a consultancy with by R.J. Burnside International Limited (Burnside).

1.1 Background

The Millet intake and the John Compton Dam (the Dam) are located within the Roseau watershed. The pumped water from the Dam combined with the gravity flow from the Millet Intake, provides the raw water supply that is treated at Ciceron, Castries and then supplied to the growing north of the island as potable water supply. The Millet Intake is a small in stream weir located approximately 190 meters above sea level constructed on the Millet River. The intake diverts water through a transmission line located within the Millet River combined with the supply from the John Compton Dam at a junction point, then by gravity on to the TR Theobalds Treatment plant at Ciceron. There is no raw water storage at this intake or along the pipeline, and the yield from the Millet Intake fluctuates greatly in direct proportion to the stream flow depending on the wet or dry season of the year. Over the years, the yield from the intake has varied from approximately 27,277 m^3 (6,000,000 imperial gallons) to approximately 4,546 m^3 (1,000,000 imperial gallons) per day. While the catchment properties have remained the same, damage to the intake works caused by Hurricane Tomas in 2010 and siltation at the point of intake are the main causes for this variation/shortfall.

The damage to the intake and transmission pipeline, and the resultant reduction in the available supply from the John Compton Dam/Millet Intake system highlighted the increased vulnerability of key water supply infrastructure to natural hazards. The objective of this Project is therefore to re-establish the Millet Intake as the primary source of raw water supply within the John Compton Dam/Millet Intake supply system and to reduce the dependency on the pumped supply that is currently drawn from the Dam. The fundamental objective therefore is to re-establish and maximize the yield from the Millet River Intake while taking into full consideration (and appropriately mitigating) environmental and social impacts and stakeholder concerns that may be identified. The anticipated works to be implemented will consist of a reconstructed intake works, and a rehabilitated 2.3 km raw water transmission main to connect to the main existing raw water pipeline that is also supplied from the John Compton Dam in the area referred to as the Junction.


Dame De Traversay
The Junction Storage Tank
The Junction
Millet
John Compton Dam
Roseau Reservoir
Existing Millet Intake
Millet Road
Miller River
Roseau River
Caribbean Sea
Atlantic Ocean
Saint Lucia
Gros Islet
Castries
Marigot
Roseau River Watershed
Canaries
Millet
Dennery
Soufriere
Micoud
Choiseul
Vieux Fort
Datum: St Lucia 1955
Coord. System: St Lucia 1955 British West Indies Grid
Projection: Transverse Mercator
Central Meridian: 62°0'0.00"W
False Easting: 400,000m
False Northing: 0m
Page Orientation: 0°
Scale Factor: 0.99950
True North
0
500
1,000
Metres
Existing Water Intake
Contour (50m Interval)
Existing Water Transmission Mains
500 x 500m Reference Grid
Roseau River Watershed Boundary
BURNSIDE
Client
WASCO
WATER & SEWERAGE COMPANY, INC.
Figure Title
DEVELOPMENT OF THE MILLET INTAKE WITHIN THE JOHN COMPTON DAM / ROSEAU WATER SUPPLY SYSTEM
PROJECT LOCATION MAP
Drawn
PS
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RDC
Date
2018/01/04
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Project No.
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Figure No.
1

The ESIA identified a number of potential environmental and social risks and provided guidance on the mitigative measures that are to be implemented to manage those risks as a component of the Project. The ESIA process provide key information that fed into the design process.

The Environmental and Social Management Plan (ESMP) is a guide for the contractor undertaking the Millet Intake Rehabilitation project to assist in ensuring that any potential environmental and social risks are managed as best as possible in a manner that does not compromise the social and physical environment affected by the project. It is appreciated that the means and methods of undertaking the required works and achieving the required results is that of the contractor, the ESMP must provide a guide with measures to ensure that the project works do not adversely impact the existing physical and social environment or that of the health and safety of the workers and affected communities.

This ESMP, along with all other associated plans, specifications, and guidelines are to ensure works are implemented and completed satisfactorily. **The ESMP must be read in conjunction with the Environmental and Social Impact Assessment (ESIA) document.** The rehabilitation works are to be monitored by the PCU, WASCO, and any other organization determined by the Government of Saint Lucia as necessary as part of a collaborative approach to ensure compliance. Ensuring continuous uninterrupted water yield at the end of the implementation period is critical.

2.0 Environmental and Social Management Plan

2.1 Objective

The Environmental and Social Impact Assessment (ESIA) and the Environmental and Social Management Plan (ESMP) were requirements of the Terms of Reference for the Millet Intake and Pipeline Rehabilitation Project and were undertaken in accordance with the DVRP Environmental Assessment/Environmental Management Framework (March 2016).

The objective of the ESIA and the ESMP were to identify the potential environmental and social impacts of the proposed works on the Project's area of influence, determine standard mitigative measures to address the impacts, and produce a plan for implementation of these measures during the works in order to minimize and manage the impacts on the natural and social environment. The ESIA and ESMP incorporate and address the relevant World Bank Operational Guidelines and Policies that apply, such as World Bank Operational Policy (OP) 4.12 Involuntary Resettlement, those for working within forested areas or Forest Reserve, and the DVRP's Resettlement Policy Framework for project affected persons (PAP).

The general area of influence for the Project includes the intake site, pipeline route and affected properties, any access routes, the immediate and wider Tet Chemin community, downstream water users or ecosystems, or any off-site areas required for any resettlement or compensatory tracts (in the case of any impacts related to private land acquisition, resettlement or economic displacement). Refer to Figure 1 above. Any relevant permit requirements were also identified and included within this ESIA.

Section 6 of the ESIA report described the link between the predicted impacts or risks, the needed mitigation measures identified during the screening and assessment process, provisions for budgeting the costs of such measures, and the roles of those responsible for ensuring that the mitigation measures are carried out. This plan stems from that section of the ESIA and is prepared in order to guide the contractor's

efforts in mitigating and managing potential environmental, social, health, and safety (ESHS) risks that may arise during project execution.

2.2 Environmental and Social Risks

The potential environmental and social risks or impacts derived from the project works are described within the ESIA. These potential impacts can be summarized as follows:

2.2.1 Environmental Impacts

- Traffic management conflicts
- Increased noise and Vibration levels
- Land clearing and deforestation
- Soil erosion and slope instability-
- Poor air quality
- Poor solid and liquid waste management
- Terrestrial pollution
- Poor water quality (source raw water)
- Potential worker/occupational health and safety related impacts

2.2.2 Social Impacts

2.2.2.1 Affected Community:

Negative

- Traffic management conflicts - see Environmental Impacts above
- Increased noise and vibration levels - see Environmental Impacts above
- Temporary Impact on livelihoods
- Loss of agricultural lands through land clearing and land take
- Poor water quality (raw)_for users downstream
- Poor communication between contractor and community

Positive

- Employment opportunities
- Improved access to farmlands
- Verification and reestablishment of property boundaries

WASCO & the Nation:

- Increased resiliency and vulnerability reduction
- Improved water supply
- Institutional capacity building
- Increased water security
- Improved access for infrastructural maintenance

In addition to the above impacts, the recent **COVID-19 pandemic** and its effects must be considered as a major risk that must be seriously addressed with the appropriate measures on site during the works. The ESIA study was prepared prior to the pandemic. However, recognizing the current reality that it is a highly

contagious and potentially deadly disease, measures have been incorporated within this ESMP to attempt as best as possible to mitigate its effects during the project.

The contractor is to be cognitive of the identified risks and those that may become evident during the course of the execution of the works, and the ESMP is to ensure that his actions do not adversely increase any negative social or environmental impacts but contribute to enhancing the positive benefits perceived.

3.0 Mitigative & Management Measures to address Risks

Mitigative measures address the potential risks or impacts of the Project works and to reduce or avoid any negative impact on the environment over the short to long term. The major potential impacts for the intake and pipeline project is expected to occur during construction phase when there is continuous activity. While these impacts are not expected to be major, the careful implementation of mitigative measures will allow for the reduction or avoidance of any adverse effects.

A number of general impacts or risks along with their causes during the works were identified under Table 5 within the ESIA along with a list of the potential mitigative measures under Table 7 in the same document. Table 5 from the ESIA is presented in Appendix 1 below for reference.

Table 1.0 below presents the potential risks identified, along with updated measures to be implemented to address them. These measures must be read and implemented by the contractor who will undertake the civil works in conjunction with all other plans, statutory permits, contractual clauses, and requirements. This also allows for ease of monitoring to ensure compliance.

Table 1.0 Impact Areas and Mitigative Measures to be Implemented

	IMPACT AREA	**MITIGATIVE MEASURES**
1	Traffic Management impacts	(a) The contractor is to prepare and be guided by a **Traffic Management Plan** and its details to manage all traffic during the construction process in a safe and responsible manner. This plan to ensure safety of local communities from construction traffic as well as general traffic. This plan must be read in conjunction with **the Site Management Plan** that specifies how the working site will be laid out with office structures, toilet area, parking, maintenance areas, and traffic circulation within and into the work site. (b) The Traffic Management Plan is to be submitted to, reviewed by, and approved by the Traffic Department of the Ministry of Infrastructure, Ports, Energy and Labour. (c) Alternative routing as may be necessary, is to be implemented as per the Traffic Management Plan to mitigate impacts from extended road works and blockages. (d) All applicable traffic safety measures such as the travelling of vehicles within local speed limits, the wearing of seat belts, the use of lighting during adverse weather or in the evening, and all necessary precautions for the community environment within which the project is to occur is to be adhered to.

		(e) Signposting, warning signs, barriers and traffic diversions must be posted and clearly visible as well as rubber rumble stripping, cones, and the public warned of all potential hazards as per the Traffic Management Plan. (f) Active traffic management safety measures to be implemented by trained and visible staff such as signal persons at the site or along roadways as required to ensure safe and convenient passage for all vehicular and pedestrian public. (g) The contractor may need to adjust work activities or working hours to address local traffic patterns, e.g. avoiding the transport of large or long construction equipment or materials during rush hours or other pertinent times (h) A communication plan must be developed by the Contractor in conjunction with the Client and implemented to ensure that open and effective communication is fostered with adjacent community, landowners, and farmers. (i) The public to be notified of all disturbance to their normal routes via the measures of the communication plan. (j) Provision must be made for the safe passages and crossings for all pedestrians where construction traffic interferes with their normal route and routine.
2	Noise & Vibration	(a) The contractor to prepare **a Noise Management Plan** in light of the site being in an environmentally sensitive forested reserve area. This plan is to outline all the means and methods to be implemented by the contractor to reduce any potential noise and nuisance impacts on the surrounding biodiversity and the community. This plan is to be reviewed by the Client and PCU. (b) Construction / work activities will occur within specified daylight hours e.g. 8:00 am to 4:00pm. Extended work hours will be agreed upon with the Client and the PCU. (c) The Client to inform the Community / public in advance of any work activities to occur outside of normal working hours, during nighttime, or on weekends. (d) The construction site should be hoarded wherever possible and as necessary to reduce incidence of noise. (e) During operations, the engine covers of generators, air compressors and other powered mechanical equipment shall be closed, and equipment placed as far away from residential areas as possible. (f) There will be no excessive idling of construction vehicles at the site. (g) Noise suppression equipment or systems supplied by manufacture will be utilized. (h) Ensure all vehicles and equipment are properly serviced and functioning as required. (i) No unnecessary heavy vehicles such as heavy tonnage rollers should be used if not required, and if they are, should only be used within specified times and periods as agreed with consultant and client to reduce incidence of vibration nuisance on adjacent residential area.

		(j) The contractor must work with the Client, PCU and consultant in developing and implementing a public notification in the event that unexpected prolonged noise and or vibration generation is expected to occur and affect nearby residents. In such an instance a noise management plan is also to be developed and implemented.
3	Land Clearing and Deforestation	(a) Any works to be undertaken in respect to clearing of vegetation must be reviewed first by the local Forestry Department of the Ministry of Agriculture to ensure it does not adversely affect existing biodiversity. (b) Any works to be undertaken must be cognizant of the adjacent riverine system and there must be no unnecessary clearing of natural vegetation. (c) The use of herbicides or other chemicals for site clearing must be avoid. (d) If any herbicide is to be used it must conform to the list of acceptable herbicides that are not banned by the relevant local authority and it must be supervised by the Forestry Department (e) There must be minimal unnecessary impact to flora and fauna as possible by clearing or the project construction activities. (f) All recognized natural habitats, wetlands and protected areas in the immediate vicinity of the activity must not be damaged or exploited and consideration must be given to the mating and nesting periods for any critical species identified. (g) The contractor must ensure that all staff will be strictly prohibited from hunting, foraging, logging or other damaging activities within the area. (h) A survey and an inventory shall be made of large trees in the vicinity of the construction activity, large trees shall be marked and cordoned off with fencing, their root system protected, and any damage to the trees avoided. (i) There will be no unlicensed borrow pits, quarries, or waste dumps on site on in close proximity to the river. (j) Upon completion of any clearing, all cut wastes must be immediately removed from the area and stockpiled on site for removal. (k) Alternatively, the contractor may use a woodchipper to mulch the cut vegetation and spread it inland away from the river where it can be also be utilized by the farmers. (l) The Client and the contractor can liaise with the Forestry Department to undertake a replanting program with deep rooted vegetation along the riverbanks in addition to any engineered structures to be placed at the end of the project to encourage regrowth and maintain bank stability.
4	Soil Erosion and Slippage	(a) The contractor must develop and implement a **Slope Management and Erosion Control Plan** to manage excavation and earth works so that these do not adversely contribute to slope and soil destabilization. This plan would include measures such as benching as necessary, cutting and reposing slopes based on soil characteristics and engineer's direction, temporary retaining

		structures, replanting slopes or disturbed areas with deep rooted grasses and other vegetation, etcetera. (b) The contractor must establish appropriate erosion and sediment control measures such as hay bales, sedimentation basins, silt fences, or silt traps in and around the river in order to prevent sediment attributed to the construction activities from causing excessive siltation, turbidity, blockage or pollution of the river and affecting downstream users. (c) Proper site drainage must be implemented to reduce water logging and to provide proper collection and management for the disposal of site runoff. (d) Any clogging of the river by any construction material or sediment must be removed as soon as possible to prevent overflow and flooding. (e) The use of retaining structures in conjunction with the planting of deep rooted grasses to retain soil and enhance bank stability during and after works along the riverbanks must be undertaken by the contractor in collaboration with the Client and Forestry Department. (f) The use of bio-engineering methods must be considered as a measure to reduce erosion and land slippage. (g) In undertaking the works, the contractor must keep the angle of slopes of any excavation or stored material within limits of the encountered soil type. (h) Terracing, as well as balancing cut and fill where necessary and if appropriate to limit the steepness of slopes. (i) All slopes and excavated areas must be monitored for movement by contractor and the engineer. (j) Existing vegetation and ground cover must be preserved as far as possible if not required to be disturbed
5	Poor Air Quality	(a) Construction materials such as sand, cement, or other fines should be kept properly covered. (b) All cement should be kept stored within a shed or sealable container. (c) The sand and fines used for construction can be moistened with sprays of water to reduce the incidence of dusting. (d) Unpaved construction access roads should be compacted and then wet periodically to reduce the incidence of dust especially during dry conditions. (e) All demolition debris shall be kept in a controlled area and sprayed with water mist to reduce debris dust until this material can be properly removed from site and disposed of. (f) During pneumatic drilling/destruction of rock walls or faces, dust shall be suppressed by ongoing water spraying and/or installing dust screen enclosures at site (g) There must be no open burning of construction / waste material at the site. If this is approved and is to occur, it be done under the strict supervision of the local Fire Authority.

		(h) There will be no excessive idling of construction vehicles on the site that contribute to the production of excessive fumes or exhaust. (i) The bins of all haulage vehicles transporting aggregate or building materials must be covered at all times as they traverse the public roads.
6	Solid and Liquid Waste Management (general)	(a) Contractor to develop and implement **a site Waste Management Plan** that will include a description of how the various waste streams will be stored, collected and disposed of along with frequency in accordance with current waste management and Public Health law. This waste will include food wastes garbage, waste related to equipment maintenance, construction and demolition related wastes, and liquid wastes (b) The contractor is to provide for the regular removal and disposal of all site wastes to approved waste management sites by licensed collectors. The Client or contracting officer must be provided with a schedule for such removal. (c) Refuse, construction, and demolition wastes will be stored in appropriate clearly labeled bins. The refuse bins must have covers or be sealable to reduce incidence of access by animals or contribute to any vector infestation. (d) Liquid and chemical wastes are to be stored in appropriate containers separated from the general refuse and clearly labeled. (e) The records of waste disposal will be maintained by the contractor as proof of proper management as designed. (f) Whenever feasible the contractor will reuse and recycle appropriate and viable materials (except asbestos which is hazardous). (g) Construction related liquid wastes must not be allowed to accumulate on or off the site or allowed to flow over or from the site into the river in an uncontrolled manner or to cause a nuisance or health risk due to its contents. (h) All construction waste or demolished material must be removed from the surrounding area or from within the river immediately if possible, or by end of each working day and stored in a designated area on site for disposal.
7	Solid and Liquid Waste Management (hazardous)	(a) Contractor must provide temporary storage on site of all hazardous or toxic substances in safe leak proof containers clearly labeled with details of composition, properties, and handling information in order to prevent potential spillage and leaching into soil or the riverine system. (b) These wastes shall be transported by specially licensed carriers and disposed in a licensed facility as per applicable local health and waste management regulation and the Authority. (c) Paints identified with toxic ingredients, solvents, or lead-based paints that are a health risk to humans and the environment, will not be used on this project. (d) Banned chemicals will not be used on the project. (e) The use of herbicides or pesticides must be avoided during this project. Manual methods of thinning of vegetation is preferred.

		(f) If termite treatment is to be utilized, appropriate chemical management measures will be implemented to prevent contamination of surrounding areas and use only licensed and registered pest control professionals with training and knowledge of proper application methods and techniques.
8	Terrestrial and Riverine Marine Pollution/ raw water quality	(a) The contractor must implement all necessary waste management plans and measures as per 6 and 7 above. (b) All construction waste related, or demolished material must be removed from the surrounding area or from within the river immediately or by end of each working day and stored in a designated area on site for disposal. (c) All construction materials, including chemicals, must be properly stored on site in designated containers or enclosed safe spaces. (d) See appropriate erosion and sediment control measures in 4 above. (e) The contractor is to prepare a **Water Resource Protection Plan** to prevent any contamination of the area water resources as best as possible. The plan must include a **water quality monitoring program** must be established by the contractor to determine exiting water quality and to monitor the effectiveness of measures implemented to ensuring the maintenance of that water quality. Initial water quality testing must be undertaken before construction commences to establish a baseline on siltation and turbidity levels. During construction monitoring is to be undertaken on a daily basis before work begins, and at the end of the workday to determine the effectiveness of sedimentation control measures. All records kept at the site office for review. The proposed sampling points are to be 10 m above and below the site within the river. The proposed acceptable impact on turbidity limit is 50 NTUs attributed to project related activities. Other parameters and limits may be determined in collaboration with CARPHA. (f) Measures such as silt traps, silt curtains, straw bales, to be used to manage any potential siltation within the river during the construction period. There must be visual and physical inspection of all implemented measures on a daily basis which includes before the commencement of work, and also during the workday as necessary. Any damage observed must be repaired, or the protective measure replaced immediately. (g) Construction vehicles and machinery must not be washed in or near the river but only in designated areas outside of the site where runoff will not impact natural surface water bodies. (h) The contractor must develop **a Spill Management Plan** with clear procedures for prevention of accidental spillage of fuels, oils, lubricants, and other toxic or noxious substances, and response / clean up procedures to be implemented in such instances.
9	Occupational Health and Safety Issues	(a) All relevant local Labour and Occupational Health and Safety laws and regulations must be adhered to ensure worker safety. (b) The contractor must prepare **an Occupational Health and Safety Plan** and ensure it is in place to guide work activities and provide a healthy and safe

		environment for workers and local residents. This Health and Safety Plan must also (c) A **COVID-19 Response Plan** must be developed and implemented. This plan must contain the site protective measures derived from the national measures prescribed by the Chief Medical Officer and other recognized national/ international authorities which must be implemented on site at all times. The plan must include measures such as the wearing of masks, the use of hand sanitizers, the washing of hands with soap and water, the practice of social distancing especially during meetings, restricting the number of passengers within a vehicle, regular sanitizing of all highly used or touched public areas such as washrooms and kitchen areas, the identification, prevention of entry, or removal of any person with cold or flu like systems to or from the site. All persons with any suspected symptoms are to be immediately referred to the appropriate designated health care facility for immediate examination and treatment as necessary based on their symptoms. (d) The contractor must develop and implement **an Adverse Weather Response Management plan** to be implemented during storms and any adverse weather condition, especially hurricanes to speaks to measures to ensure the safety of workers, equipment, and the general site during these weather events. (e) In the event of severe weather, the contractor shall secure the construction site and associated equipment in such a manner as to protect the site and adjacent areas from consequential damages. This includes the management of onsite, construction materials, construction and sanitary wastes, additional strengthening of erosion control and soil stabilization systems, and other conditions resulting from contractor activities which may increase the potential for danger or damages. There are to be no workers on site during any adverse weather. (f) Workers must be provided with necessary safety and personal protective equipment/ gear (PPE) by the contractor as per their specific tasks such as hard hats, reflective vests, overalls, gloves, goggles, boots, etc. and these must be worn at all times during the execution of the specific work tasks. (g) All equipment used on site must be inspected on a daily basis for any damage, excessive wear, leakage, or any faulty condition to minimize potential danger to employees. Any faulty equipment must be serviced immediately. (h) Sanitary facilities must be provided for all workers on site to reduce any incidence of indiscriminate disposal of human wastes, and these facilities must be cleaned, sanitized, and managed on a daily basis. (i) The contractor must ensure that there are basic medical first aid facilities on site which should include a medical kit with first aid supplies, and that there are staff trained in basic first aid. (j) Appropriate posting of information within the site, including the site office, must be done to inform workers of key rules and regulations that they are required to follow.

		(k) Storage, use, and disposal of chemicals, materials such as any paints, and or preservatives shall be managed in conformance with the manufacturers' recommendations to reduce potential health and environmental impacts. (l) The contractor must develop and implement a **Contractor's Code of Conduct** that applies to the interaction of all staff including subcontractors, within the site, and with the affected communities addressing such areas as violence (including gender based violence), gender equality, child protection, vulnerable people (including those with disabilities), sexual exploitation and abuse (SEA), sexual harassment, drug usage and abuse (including alcohol), discrimination and harassment, drunkenness, the deliberate spread of communicable diseases, HIV/AIDS awareness and prevention, theft, including theft of farmers' crops, or any condition or practices that pose a safety risk to the project, site, or the community. Specific training may also be facilitated by the contractor for all staff to complement the specific areas highlighted within the Code of Conduct. The reporting and the penalties for non-conformance with the code must be clearly defined, explained, and implemented. There must be a grievance redress mechanism, that includes the recording of the types of grievances, as well as providing for the protection of confidentiality especially for those reporting allegations of SEA. (m) The use of any illegal substances according to local law will not be tolerated on site at any time and infractions will be subject to legal framework of Saint Lucia. (n) All workers are to be briefed on the presence, identification and precautionary measures to be undertaken in the event of any encounters with poisonous snakes such as the Fer de lance which inhabits the site environment. (o) All workers are to be instructed regularly as to how to manage themselves in the event of being bitten by a poisonous snake (Fer de lance) and the emergency measures to be undertaken on site immediately, contacting the nearest medical facility with anti-venom, and measures pertinent to the transportation of the victim to the medical facility with the anti-venom. (p) The identification, location, and contact number for medical facilities and emergency services, including the main hospital with snake antivenom, is to be posted in a visible location on site easily accessible by all workers. (q) The contractor is to arrange for security after working hours to ensure the security of the site, equipment, and materials.
10	Damage to Services	(a) Main electrical and telecommunication services are located along the main roads to the site. The contractor is to organize and undertake site inspection with the representatives of the service companies to determine the locations of their service lines/ routes on and around the site prior to the commencement of any construction especially if trucks and materials of certain large sizes are expected to be used. (b) Contractor to develop a response plan in conjunction with the service companies to respond to any damage to service infrastructure during works.

11	Community Engagement, Issues/ Grievances General	(a) The contractor's Code of Conduct that prescribes measures to reduce potential negative social impacts within the site, and between the contractor's staff and the community, must guide interactions with the project affected communities (refer to 9 above). (b) To foster sustainable linkages with the affected communities, the contractor should source available skilled and unskilled workers from the communities to supplement his total workforce and engage in rotational employment if necessary, to allow for equitable opportunity. Both male and females must be involved to encourage gender inclusion. (c) The contractor should offer any large trees that may have been felled or appropriately sized vegetation to the community so that farmers may be able to utilize them for the making of charcoal which is an economic activity. (d) The PCU is to work closely with the Client and the contractor to develop and implement a communications plan to inform community of the progress of works and which also must contain measures to facilitate community feedback and address and resolve any complaints / issues that may arise (redress) in a very timely and respectful manner. This will also mean working with the Millet Development Committee (MDC). (e) Contractor must work with client and consultant to ensure open communication and address all issues that may arise.

4.0 Management Strategies and Implementation Plans (MSIP) to manage the Environmental and Social Risks

The contractor will be required to provided Management Strategies and Implementation Plans (MSIPs) to manage the key risks or impacts identified. Some of these are reflected within the mitigative measures highlighted within table 1.0 and in their preparation will require the contractor to provide plans with comprehensive and concise detail outlining his means and methods to address the respective risk areas.

While the general risks attributed to the works and this particular site have been identified above, the following have been identified by the PCU as **key environmental, social, health and safety risks** that will require the preparation of specific MSIPs because of their high degree of impact on the community and especially the riverine system as a raw water supply:

Noise – The general movement of construction vehicles and equipment along the narrow community roads as well as the operation of machinery will contribute to noise nuisance and negative impacts on the community, and within the forest on the biodiversity there. Increased noise and vibration levels through construction activities such as the movement of heavy supply trucks and the movement of equipment through the narrow Millet roadways may be deemed as an unnecessary and unwanted nuisance affecting day to day activities. Associated vibrations impact structures close to the road causing nuisances through the shaking of households and household items, and possibly affecting the stability of these structures if not properly constructed. While temporary and periodic, such noise impact is a negative one.

Within the forested site, the operation of machinery such as excavators within what is generally a quite natural zone, will impact biodiversity and habitats. Creatures such as the Saint Lucian Parrot or the Boa

constrictor who inhabit and nest in these areas will tend to abandon their nesting areas as a result of such disturbances. Mating seasons may be affected depending on the time of year that the project activities commence. Care must be taken in the judicious usage of any form of heavy noise and vibration generating equipment.

Traffic – The safety of the community and of the contractor's workforce as they and equipment traverse the roads within the community are key considerations. The possibility exists for vehicular/vehicular and pedestrian/vehicular conflict which can increase as the scale of construction increases with transportation of construction material and long pipe sections if proper traffic management procedures are not implemented. The matter of safety also becomes a great concern in relation to the speed of the vehicles as well as the alertness of the drivers as they traverse the Millet roads through the communities. Combined with this may be inadequate instruction of these drivers, lack of warning signs, lack of visible personnel on ground directing traffic, as well as poor vehicular manoeuvring during the project period. Lack of information within the community on the specific or extra working times and movement of vehicles can mean the unpreparedness of residents who tend to walk the roads at certain times, especially in the later evenings. This become particularly hazardous if there are children within the vicinity going to or leaving school, or who may be accustomed to playing on the roads or sidewalk areas. The breakdown of a large project vehicle causing the blockage of the public transportation route, especially during the morning rush hour, can escalate tensions within the community especially if it contributes to loss of travel time to work, school, or returning home. Associated with the movement of vehicles, there is always the potential impacts of dust, fumes, noise, and vibrations on residents as highlighted above.

Health and Safety – The work site is within the Forest Reserve and away from the nearest community and health facility requiring a long response time in the event of any injuries or emergencies. While the nearest small facility is the Millet Health Centre located within the wider Millet Community with the ability to treat minor injuries, the main medical facility, i.e., the OKEU Hospital is located in Castries where any major injury can be treated. The location of site, approximately 2 km or 2.5 Km inland via unpaved narrow walking tracks from any main road depending on the route taken, also negates the direct response of any ambulances by reason of its location and will required a planned effort to extract an injured person and get them to the main road for any medical assistance provided by first responders. Of particular note is that the site is within the habitat of the poisonous Fer De lance snake and this increases the risk for possible snake encounters and attacks. The nearest supply of snake anti-venom is in the above-mentioned OKEU Hospital in Castries. The isolation of the work site requires that strict health and safety protocols be implemented and adhered to minimize the incidence of any potential risks to life. Additionally, proper interpersonal interaction amongst all staff within the site as well as with the community along with a work environment that conforms to certain stipulated ethical and responsible guidelines will also assist in providing the framework for the health and safety of all during the project.

COVID 19 – The COVID 19 or Corona Virus is a highly contagious disease caused by a coronavirus called SARS-CoV-2 which adversely affecting the respiratory system and whose spread since December 2019 has resulted in a global pandemic taking many lives. According to the national Medical and Health Authorities, the virus is thought to spread from person to person mainly through respiratory droplets produced when an infected person coughs or sneezes. These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs. Spread is more likely when people are in close contact with each other i.e. within 2 m (6 feet). It may also be possible that a person can get COVID-19 by touching a surface or object that has the virus on it and then touching their own mouth, nose, or possibly their eyes. Older adults and people with severe underlying medical conditions like heart or lung disease or diabetes appear to be at higher risk for developing more serious complications from COVID-19. While Saint Lucia has been affected by this disease, national efforts, which continue to be implemented, requires the social

distancing, the wearing of face masks, and strict personal hygiene practices among the various protocols in order to curtail the spread of the disease. The risk of interpersonal spread within the work side as well as spread to or from the community by interaction is a serious risk and all efforts must be made to ensure this occurrence is minimized.

Contamination of Water Resources – the Millet River is a main source of water for agricultural activities and limited domestic uses within the adjacent and downstream communities, and is also a main contributor of raw water from source along with the John Compton Dam that is treated at WASCO's Ciceron Water Treatment Plant to provide potable water for the north of the island. The yield from the Millet intake has varied from approximately 27,277m3 [6,000,000 imperial gallons] to approximately 4,546m3 [1,000,000 imperial gallons] per day and varies depending on the season and the variation in the streamflow. With annual drought conditions, emergency rationing, and the desilting works for the John Compton Dam where that source may be shut off periodically to facilitate the works over time, it is critical that the water quality within the Millet River be maintained at all times. This is particularly so with the proposed works that will occur within and adjacent to the river that will involve the clearing of vegetation, excavation and disturbance of slopes and soils, along with the demolition of an existing stone and concrete intake structure. The matter of managing any potential contamination of the riverine system is critical.

To ensure that the contractor addresses the key risks in a capable manner, the following **detailed plans** will be required prior to mobilization and commencement of any works on the site. These are as follows:

- **Traffic Management Plan** to ensure safety of local communities from construction traffic as well as general traffic;
- **Water Resource Protection Plan** to prevent any contamination of the raw water supply;
- **Health and Safety Management Plan** to ensure safety of workers and adherence to good labor practice and law
- **COVID-19 Management Plan** to ensure the implementation, practice, and adherence to strict preventative and management protocols to prevent the spread of the diseases
- **Contractor's Code of Conduct** for the contractor's personnel to guide all inter staff interaction on site and interaction with the community during the project

The COVID-19 Management Plan may be provided as separate standalone document or as a detailed part of the Health and Safety Management Plan.

A **Contractor's Code of Conduct** for the contractor's personnel would be required to guide all inter staff interaction on site during the project as well as interaction with the community in an ethical and non-destructive way to reduce any potential social risks. Appendix 2 provide a guide for the preparation and content of such a plan to which the Contractor may add additional requirements as appropriate, including to take into account Contract-specific issues/risks.

These strategies and plans are supposed to provide detailed descriptions of the requisite actions, materials, equipment, management processes etcetera. that will be implemented by the contractor, and any subcontractors. In developing these strategies and plans, the contractor will have to ensure that he has carefully considered and costed the provisions outlined in the works contract and all ancillary plans and documentation required.

5.0 Supervision, Monitoring, and Reporting

5.1 Approach and Responsibilities.

A unified and integrated approach must be adopted in reviewing and monitoring the project from pre-construction to operations in to respond to any issue that may arise. The purpose of the ESMP and its conditions reflected in the construction and operational contract are to ensure accepted good practices are employed and maintained in order to mitigate any adverse environmental impacts.

The contractor will be responsible for on-ground implementation, monitoring, and abiding by the contract clauses, recommendations, and mitigative measures. The frequency of monitoring will be determined by the requesting agencies, but will be frequent enough to allow them to determine site changes, the environmental conditions, and the adequacy of the mitigative measures, and the overall ability of the contractor to execute the works in the specified and sustainable manner. The main agencies will be the WASCO and the PCU. The second most important agency will be the Forestry Department. Additional agencies such as the Ministry of Health or the Ministry of Infrastructure, or labour Department may monitor as well as part of their routine or be called in for a specific occurrence.

WASCO is the implementing agency, but the with the PCU has the responsibility to supervise and monitor the project. However, the PCU can also share such responsibility and have the ability to co-opt other technical departments and ministries to assist in executing this duty especially where it came to monitoring and reporting on the technical aspects of the works as necessary, especially where it pertained to the requirements or conditions of the World Bank.

Table 1.2. Responsibility and Monitoring Elements of the Environmental and Social Management Plan (ESMP)

Category of Project	Impact Area	Mitigative Measures	Mitigation Responsibility	Monitoring	Frequency
Culvert Crossing Rehabilitation	Traffic Conflict issues	As per mitigative measures (a) to (j)	Contractor	Contractor WASCO PCU, MIPEL/ DIPE, Police	Daily Daily Monthly As required As required
	Noise & Vibrations	As per mitigative measures (a) to (j)	Contractor	Contractor WASCO PCU, CARPHA	Daily Daily Monthly As required
	Land clearing and Deforestation	As per mitigative measures (a) to (l)	Contractor	Contractor WASCO PCU, MAFPPNRC	Daily Daily Monthly As required and Weekly
	Soil Erosion and Slippage	As per mitigative measures (a) to (j)	Contractor	Contractor WASCO PCU, MAFPPNRC	Daily Daily Monthly

Category of Project	Impact Area	Mitigative Measures	Mitigation Responsibility	Monitoring	Frequency
					As required and Weekly
	Poor Air Quality	As per mitigative measures (a) to (i)	Contractor	Contractor WASCO PCU, MHW CARPHA	Daily Daily Monthly As required As required
	Solid and Liquid Waste Management (general)	As per mitigative measures (a) to (h)	contractor	Contractor WASCO PCU, MAFPPNRC SLSWMA	Daily Daily Monthly As required As required
	Solid and Liquid Waste Management (hazardous)	As per mitigative measures (a) to (f)	contractor	Contractor WASCO PCU MAFPPNRC CARPHA, Fire Service	Daily Daily Monthly As required As required As required
	Terrestrial and Riverine Marine Pollution	As per mitigative measures (a) to (l)	Contractor	Contractor WASCO PCU, MAFPPNRC CARPHA, Fire Service	Daily Daily Monthly As required As required As required
	Occupational Health and Safety Issues	As per mitigative measures (a) to (j)	Contractor	Contractor WASCO PCU, MHW Labour Dept	Daily Daily Monthly As required As required
	Damage to Existing Services	As per mitigative measures (a) to (b)	Contractor	Contractor WASCO, PCU DIPE, LIME, DIGICEL, WASCO, LUCELEC	Daily Daily Monthly As required As required As required As required As required
	Community Engagement, Issues/ grievances_ General	As per mitigative measures (a) to (e)	Contractor	Contractor WASCO PCU	Daily As required As required

Key:

MHW-Ministry of Health and Wellness **CARPHA**- Caribbean Public Health Authority **DIPE**- Department of Infrastructure, Ports, and Energy **LD**- Labour Department, **SLSWMA**- Saint Lucia Solid Waste Management Authority **MAFPPNRC**- Ministry of Agriculture, Fisheries, Physical Planning, Natural resources and Cooperatives **WASCO**- Water and Sewerage Company Inc **LUCELEC**- Saint Lucia Electricity Services Limited

5.2 Reporting

In order to gauge and ensure compliance with the ESMP and any recommended actions by the World Bank, the Client, or any contributing statutory agency, the contractor will need to engage an **Environmental, Social, Health and Safety (ESHS) monitoring officer**. This officer will be responsible for ensuring that the requisite World Bank's ESHS policy requirements, the Client's requirements, and the stipulations of the ESIA and ESMP are being adequately met. While they will report to the contractor, they will also be required to liaise with the client and the Environmental and Social Safeguards officer of the PCU. The required monitoring and reporting with be undertaken on a regular basis stipulated by any particular contractual obligation between the contractor and client and PCU.

5.2.1 Reporting Matrix

A proposed reporting matrix to support the monitoring and reporting efforts of the ESHS officer is proposed in Appendix 3 of this document.

6.0 Reference Project Specific Documents

The following project specific documents are highlighted as refence to this ESMP.

Feasibility Study and Detailed Designs for the Development of the Millet Intake within the John Compton Dam Raw Water Supply System:

- Data Evaluation and Assumptions Report, Rev. 1 – January 26, 2018;
- Inception Report, Report No. 1, Rev. 1 – January 26, 2018;
- Preliminary Environmental and Social Impact Assessment and Environmental and Social Management Plan, Report No. 2, Rev. 2 – February 22, 2019 (included as a component of Report No. 6);
- Environmental and Social Impact Assessment and Environmental and Social Management Plan, Report No. 2, Final – March 22, 2019;
- Design Criterion Report, Report No. 3, Rev. 1 – May 18, 2018;
- Validated Design Information Report, Report No. 4, Rev. 1 – August 3, 2018;
- Design Options Review Report, Report No. 5, Rev. 1 – August 15, 2018;
- Draft Design Report, Report No. 6, Rev. 0 – February 22, 2019; and
- Design Report, Report No. 7, Rev. 0 – March 22, 2019.

7.0 Recommendations

The following key recommendations are made to assist in ensuring the ESMP conditions are implemented to meet environmental, social, health, and safety conditions (ESHS).

Key Actions to be implemented:

1. The contractor is to implement the ESMP and its stipulated measures to ensure the minimization and management of any potential negative environmental and social impact from the project on the environment and the community.
2. The contractor is to employ an Environmental, Social, Health and Safety (ESHS) Monitoring officer to ensure that the World Bank's ESHS policy requirements, the Client's requirements, and the stipulations of the ESMP are being adequately met.
3. The contractor is to work collaboratively with the client, PCU, and World Bank to ensure the successful implementation and completion of this project to the levels and functionality required by these agencies, especially the client (WASCO).
4. The Client must employ an environmental monitoring officer and a Social Monitoring Officer to monitor the implementation of the ESMP actions to ensure the contractor is implementing and abiding by all the requisite environmental, social, health and safety management plans, procedures, and measures, and the degree of effectiveness of these measures.
5. The PCU through its social safeguards monitoring officer is to monitor the project from beginning to end and ensure the implementation of the required procedures under the WB and DVRP Resettlement policy to ensure fair resolution of any issues, compensation, and acquisition of the required properties to facilitate the project. The officer through the PCU is also to ensure that all affected parties are aware of the redress mechanism
6. The Client and the contractor must engage and work collaboratively with the Ministry of Agriculture from the preconstruction stage during all land clearing to ensure that there is no adverse impact on the riverine system or as well as existing flora or fauna compromising existing biodiversity.
7. The Client and contractor must develop and implement communications plans not only to provide the general public and the community with project information, but to also maintain and ensure effective communications between all stakeholders.
8. The contractor's construction methods are to follow best international construction and construction management practices and abide by applicable policy stipulations from the World Bank and abide by the requirements of all relevant locally authorities.

8.0 APPENDICES

APPENDIX 1

Table 5: Potential Environmental & Social Impacts Related to the Works Related to the Preferred Alternative for the Reconstruction of the Millet Intake

Table 5: Potential Environmental & Social Impacts Related to the Works Related to the Preferred Alternative for the Reconstruction of the Millet Intake

Activity Causing Impact	Potential Impact	Impact Category Environmental or Social	Positive/ Negative
Preliminary Phase			
Clearing of vegetation for topographic surveys and for geotechnical investigations for the intake works and along the route of the transmission pipeline	Destruction of habitat Impact on the crops of local farmers	Environmental Preliminary or Social	N
Construction Phase			
- Removal of vegetation for the excavations of foundations and trenches for the intake works and transmission pipeline - Construction activities, including use of heavy machinery - Stripping of topsoil, excavation, stockpiling, grading as may be required for the proposed works - Clearing and excavations at borrow pits and preparation of staging areas for construction equipment and materials - Stockpiling of soils and aggregates	Soil erosion Siltation of riverine water Destruction of habitat Impact on the crops of local farmers Loss of land used by local farmers	Environmental Environmental Environmental Social Social	N
- Grading as necessary for the construction of structures, raw water transmission pipeline, valve chambers and related appurtenances - Creation of stockpiles of excavated and borrow material - Haul roads for materials and equipment - Compaction of soils by heavy vehicles and construction equipment - Use of borrow pits	Changes of the terrain morphology Soil erosion Siltation Destruction of habitat Impact on the crops of local farmers Loss of land used by local farmers	Environmental Environmental Environmental Environmental Social Social	N
- Potential spills of fuel, lubricants and other liquid from vehicles and other construction equipment - Spills from temporary sanitary installations - Waste (garbage) from workers and other construction activities	Contamination and degradation of soil Pollution of surface water	Environmental Environmental	N
- Activities on days with high rainfall and runoff	Potential soil erosion and inundation Transport of contaminates; increased sedimentation in waterway	Environmental	N

Activity Causing Impact	Potential Impact	Impact Category Environmental or Social	Positive/ Negative
- Improper management of solid and liquid waste from the working area (domestic effluents, water and oils from vehicles washing, material storage)	Pollution of soil, groundwater and surface water	Environmental	N
- Uncontrolled use of fuel and lubricants during the operation of construction vehicles and machinery - Accidental leakage of hydrocarbons and other hazardous products	Groundwater, soil, and surface water pollution	Environmental	N
- Operation of construction equipment - Excavation, backfilling and compaction activities	Increase in the noise and vibration levels Creation of resultant dust and particulate material Impact on existing wildlife/fauna and their habitats, potential destabilization of banks and slopes	Environmental and Social Environmental and Social Environmental	N
- Emissions of atmospheric pollutants due to poor maintenance and operation of construction equipment - Unauthorized and uncontrolled burning of waste	Increased emission of smoke and gases (CO, SO2, NOx, particulates and black smokes), Impact on existing wildlife/ fauna and their habitats	Environmental	N
- Increased concentration of airborne dust	Reduced visibility Coating of vegetation, buildings and laundry; occupational health related issues	Environmental and Social	N
- Activities related to the intake and raw water transmission pipeline - Activities specifically related to access roads - Development of temporary staging sites along the construction corridor - Development and operation of borrow sites	Change in the aesthetic quality of landscape Reduction of forest area Physical loss of habitat Reduction of animal species Land use compatibility in the area	Environmental and Social Environmental Environmental Environmental Social	N

Activity Causing Impact	Potential Impact	Impact Category Environmental or Social	Positive/ Negative
	Loss of land used by local farmers	Social	
- Activities on or adjacent to surface waters	Loss of habitat of benthic communities	Environmental	N
- Construction activities	Temporary job and income creation Upliftment of the local communities due to job creation Temporary income generation from support services such as provision of meals and refreshment during project works by commercial establishments in the local communities	Social Social Social	P
- Activities related to: - The intake and raw water transmission pipeline - Access roads - Temporary staging sites - Development of borrow sites	Interference with the local economic and social activities of the population Potential Loss of crops and some agricultural land	Social Social	N
- Transportation of materials and equipment along public roads to the work sites	Disturbance of traffic and accessibility patterns	Social	N
- Movement of construction vehicles and machinery along public roads	Change in the traffic intensity	Social	N
- The project as a whole	Job expectation	Social	P/N
- Possible rehabilitation of existing roads and access routes used by local farmers	Improved access	Construction and operation phases	P
- Population resettlement - Disturbances caused by the construction activities	Disturbance to activities of local communities;	Social	N
- Higher concentration of people in the construction area	Potential increase in the incidence of social issues	Social	N
- Most activities	Work related and roadway accidents	Social	N
- Exposure to chemical substances - Exposure to dusts, noise and vibrations	Incidence of occupational health related impacts	Environmental and Social	N

Activity Causing Impact	Potential Impact	Impact Category Environmental or Social	Positive/ Negative
- End of construction activities	Loss of jobs with the end of the construction and increase of social vulnerability	Social	N
Operational Phase			
- Improvement of the water supply service	Lifestyle character of the affected communities	Social	P
- The project as a whole	Upliftment of the communities due to improved water supply services	Social	P
- The project as a whole	Increased resiliency and reduction in vulnerability of water supply to impacts from natural hazards	Social	P
- The project as a whole	Improved water supply providing consistent water yield	Social	P
- The project as a whole	Capacity building for WASCO technical staff through experience sharing with consultants and possible introduction to new approaches and methodologies	Social	P

Source: Feasibility Study and Detailed Designs for the Development of the Millet Intake within the John Compton Dam Raw Water Supply System_Environmental and Social Impact Assessment and Environmental and Social Management Plan – Report #2 (Final)_March 2019, pg. 41

APPENDIX 2

Code of Conduct for Contractor's Personnel (ES) Form

Note

The Contractor may add additional requirements as appropriate, including to take into account Contract-specific issues/risks.

CODE OF CONDUCT FOR CONTRACTOR'S PERSONNEL

We are the Contractor, [*enter name of Contractor*]. We have signed a contract with [*enter name of Employer*] for [*enter description of the Works*]. These Works will be carried out at [*enter the Site and other locations where the Works will be carried out*]. Our contract requires us to implement measures to address environmental and social risks related to the Works, including the risks of sexual exploitation, sexual abuse and sexual harassment.

This Code of Conduct is part of our measures to deal with environmental and social risks related to the Works. It applies to all our staff, laborers and other employees at the Works Site or other places where the Works are being carried out. It also applies to the personnel of each subcontractor and any other personnel assisting us in the execution of the Works. All such persons are referred to as "**Contractor's Personnel"** and are subject to this Code of Conduct.

This Code of Conduct identifies the behavior that we require from all Contractor's Personnel.

Our workplace is an environment where unsafe, offensive, abusive or violent behavior will not be tolerated and where all persons should feel comfortable raising issues or concerns without fear of retaliation.

REQUIRED CONDUCT

Contractor's Personnel shall:

1. carry out his/her duties competently and diligently;
2. comply with this Code of Conduct and all applicable laws, regulations and other requirements, including requirements to protect the health, safety and well-being of other Contractor's Personnel and any other person;
3. maintain a safe working environment including by:
    a. ensuring that workplaces, machinery, equipment and processes under each person's control are safe and without risk to health;
    b. wearing required personal protective equipment;
    c. using appropriate measures relating to chemical, physical and biological substances and agents; and
    d. following applicable emergency operating procedures.
4. report work situations that he/she believes are not safe or healthy and remove himself/herself from a work situation which he/she reasonably believes presents an imminent and serious danger to his/her life or health;

5. treat other people with respect, and not discriminate against specific groups such as women, people with disabilities, migrant workers or children;
6. not engage in Sexual Harassment, which means unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature with other Contractor's or Employer's Personnel;
7. not engage in Sexual Exploitation, which means any actual or attempted abuse of position of vulnerability, differential power or trust, for sexual purposes, including, but not limited to, profiting monetarily, socially or politically from the sexual exploitation of another;
8. not engage in Sexual Abuse, which means the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions;
9. not engage in any form of sexual activity with individuals under the age of 18, except in case of pre-existing marriage;
10. complete relevant training courses that will be provided related to the environmental and social aspects of the Contract, including on health and safety matters, and Sexual Exploitation and Abuse (SEA), and Sexual Harassment (SH);
11. report violations of this Code of Conduct; and
12. not retaliate against any person who reports violations of this Code of Conduct, whether to us or the Employer, or who makes use of the grievance mechanism for Contractor's Personnel or the project's Grievance Redress Mechanism.

RAISING CONCERNS

If any person observes behavior that he/she believes may represent a violation of this Code of Conduct, or that otherwise concerns him/her, he/she should raise the issue promptly. This can be done in either of the following ways:

1. Contact [*enter name of the Contractor's Social Expert with relevant experience in handling gender-based violence, or if such person is not required under the Contract, another individual designated by the Contractor to handle these matters*] in writing at this address [ ] or by telephone at [ ] or in person at [ ]; or
2. Call [ ] to reach the Contractor's hotline *(if any)* and leave a message.

The person's identity will be kept confidential, unless reporting of allegations is mandated by the country law. Anonymous complaints or allegations may also be submitted and will be given all due and appropriate consideration. We take seriously all reports of possible misconduct and will investigate and take appropriate action. We will provide warm referrals to service providers that may help support the person who experienced the alleged incident, as appropriate.
There will be no retaliation against any person who raises a concern in good faith about any behavior prohibited by this Code of Conduct. Such retaliation would be a violation of this Code of Conduct.

CONSEQUENCES OF VIOLATING THE CODE OF CONDUCT

Any violation of this Code of Conduct by Contractor's Personnel may result in serious consequences, up to and including termination and possible referral to legal authorities.

FOR CONTRACTOR'S PERSONNEL:

I have received a copy of this Code of Conduct written in a language that I comprehend. I understand that if I have any questions about this Code of Conduct, I can contact [*enter name of Contractor's contact person with relevant experience*] requesting an explanation.

Name of Contractor's Personnel: [insert name]

Signature: _____

Date: (day month year): _____

Countersignature of authorized representative of the Contractor:

Signature: _____

Date: (day month year): _____

ATTACHMENT 1: Behaviors constituting Sexual Exploitation and Abuse (SEA) and behaviors constituting Sexual Harassment (SH)

ATTACHMENT 1 TO THE CODE OF CONDUCT FORM

BEHAVIORS CONSTITUTING SEXUAL EXPLOITATION AND ABUSE (SEA) AND BEHAVIORS CONSTITUTING SEXUAL HARASSMENT (SH)

The following non-exhaustive list is intended to illustrate types of prohibited behaviors:

(1) **Examples of sexual exploitation and abuse** include, but are not limited to:

- A Contractor's Personnel tells a member of the community that he/she can get them jobs related to the work site (e.g. cooking and cleaning) in exchange for sex.
- A Contractor's Personnel that is connecting electricity input to households says that he can connect women headed households to the grid in exchange for sex.
- A Contractor's Personnel rapes, or otherwise sexually assaults a member of the community.
- A Contractor's Personnel denies a person access to the Site unless he/she performs a sexual favor.
- A Contractor's Personnel tells a person applying for employment under the Contract that he/she will only hire him/her if he/she has sex with him/her.

(2) **Examples of sexual harassment in a work context**

- Contractor's Personnel comment on the appearance of another Contractor's Personnel (either positive or negative) and sexual desirability.
- When a Contractor's Personnel complains about comments made by another Contractor's Personnel on his/her appearance, the other Contractor's Personnel comment that he/she is "asking for it" because of how he/she dresses.
- Unwelcome touching of a Contractor's or Employer's Personnel by another Contractor's Personnel.

A Contractor's Personnel tells another Contractor's Personnel that he/she will get him/her a salary raise, or promotion if he/she sends him/her naked photographs of himself/herself.

APPENDIX 3

Environmental, Social, Health and Safety (ESHS) Metrics for Progress Reports

Environmental, Social, Health and Safety (ESHS)

Metrics for Progress Reports

The following metrics shall be applicable for regular reporting:

a. environmental incidents or non-compliances with contract requirements, including contamination, pollution or damage to ground or water supplies;

b. health and safety incidents, accidents, injuries that require treatment and all fatalities;

c. interactions with regulators: identify agency, dates, subjects, outcomes (report the negative if none);

d. status of all permits and agreements:

   i. work permits: number required, number received, actions taken for those not received;

   ii. status of permits and consents:

   - *Forestry Department of the Ministry of Agriculture – permission prior to commencing clearing of vegetation and the Water Resource Protection Plan*
   - *Department of Infrastructure, Ports, Energy, and Labour- approval of the Site Management Plan, Traffic Management Plan, and Adverse Weather Response Management plan*
   - *Saint Lucia Solid Waste Management Authority- approval of the Solid and Liquid Waste Management Plan and the Spills Management Plan*
   - *Ministry of Health and Wellness – approval of the Occupational Health and Safety Plan, the COVID-19 response Plan, and the Noise Management plan*
   - *adjacent landowner agreements regarding access to the site or work outside of the property corridor*
   - *Electrical and Telecommunications Service Providers – coordinate site inspection prior to mobilization of equipment to identify location of services and methods to prevent damage to services*
   -

e. health and safety supervision:

   i. safety officer: number days worked, number of full inspections & partial inspections, reports to construction/project management;

   ii. number of workers, work hours, metric of PPE use (percentage of workers with full personal protection equipment (PPE), partial, etc.), worker violations observed (by type of violation, PPE or otherwise), warnings given, repeat warnings given, follow-up actions taken (if any);

f. worker accommodations:

i. number of expats housed in accommodations, number of locals;

ii. date of last inspection, and highlights of inspection including status of accommodations' compliance with national and local law and good practice, including sanitation, space, etc.;

iii. actions taken to recommend/require improved conditions, or to improve conditions.

g. Health services: provider of health services, information and/or training, location of clinic, number of non-safety disease or illness treatments and diagnoses (no names to be provided);

h. gender (for expats and locals separately): number of female workers, percentage of workforce, gender issues raised and dealt with (cross-reference grievances or other sections as needed);

i. training:

i. number of new workers, number receiving induction training, dates of induction training;

ii. number and dates of toolbox talks, number of workers receiving Occupational Health and Safety (OHS), environmental and social training;

iii. number and dates of communicable diseases (including STDs) sensitization and/or training, no. workers receiving training (in the reporting period and in the past); same questions for gender sensitization, flag person training.

iv. number and date of SEA and SH prevention sensitization and/or training events, including number of workers receiving training on Code of Conduct for Contractor's Personnel (in the reporting period and in the past), etc.

j. environmental and social supervision:

i. environmentalist: days worked, areas inspected and numbers of inspections of each (road section, work camp, accommodations, quarries, borrow areas, spoil areas, swamps, forest crossings, etc.), highlights of activities/findings (including violations of environmental and/or social best practices, actions taken), reports to environmental and/or social specialist/construction/site management;

ii. sociologist: days worked, number of partial and full site inspections (by area: road section, work camp, accommodations, quarries, borrow areas, spoil areas, clinic, HIV/AIDS center, community centers, etc.), highlights of activities (including violations of environmental and/or social requirements observed, actions taken), reports to environmental and/or social specialist/construction/site management; and

iii. community liaison person(s): days worked (hours community center open), number of people met, highlights of activities (issues raised, etc.), reports to environmental and/or social specialist /construction/site management.

k. *Grievances:* list new grievances (e.g. number of allegations of SEA and SH) received in the reporting period and number of unresolved past grievances by date received, complainant's age and sex, how received, to whom referred to for action, resolution and date (if completed), data resolution reported to complainant, any required follow-up (Cross-reference other sections as needed.

   i. Worker grievances;

   ii. Community grievances

l. Traffic, road safety and vehicles/equipment:

   i. traffic and road safety incidents and accidents involving project vehicles & equipment: provide date, location, damage, cause, follow-up;

   ii. traffic and road safety incidents and accidents involving non-project vehicles or property (also reported under immediate metrics): provide date, location, damage, cause, follow-up;

   iii. overall condition of vehicles/equipment (subjective judgment by environmentalist); non-routine repairs and maintenance needed to improve safety and/or environmental performance (to control smoke, etc.).

m. Environmental mitigations and issues (what has been done):

   i. dust: number of working bowsers, number of waterings/day, number of complaints, warnings given by environmentalist, actions taken to resolve; highlights of quarry dust control (covers, sprays, operational status); % of rock/spoil lorries with covers, actions taken for uncovered vehicles;

   ii. erosion control: controls implemented by location, status of water crossings, environmentalist inspections and results, actions taken to resolve issues, emergency repairs needed to control erosion/sedimentation;

   iii. quarries, borrow areas, spoil areas, asphalt plants, batch plants: identify major activities undertaken in the reporting period at each, and highlights of environmental and social protection: land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, decommissioning implementation;

   iv. blasting: number of blasts (and locations), status of implementation of blasting plan (including notices, evacuations, etc.), incidents of off-site damage or complaints (cross-reference other sections as needed);

   v. spill cleanups, if any: material spilled, location, amount, actions taken, material disposal (report all spills that result in water or soil contamination;

   vi. waste management: types and quantities generated and managed, including amount taken offsite (and by whom) or reused/recycled/disposed on-site;

vii. details of tree plantings and other mitigations required undertaken in the reporting period;

viii. details of water and swamp protection mitigations required undertaken in the reporting period.

n. compliance:

i. compliance status for conditions of all relevant consents/permits, for the Work, including quarries, etc.): statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance;

ii. compliance status of C-ESMP/ESIP requirements: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance

iii. compliance status of SEA and SH prevention and response action plan: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance

iv. compliance status of Health and Safety Management Plan re: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance

v. other unresolved issues from previous reporting periods related to environmental and social: continued violations, continued failure of equipment, continued lack of vehicle covers, spills not dealt with, continued compensation or blasting issues, etc. Cross-reference other sections as needed.

Source: Bid document preparation, Section VIII General Conditions (Page 158), Appendix B.