

**SKILLS FRAMEWORK FOR LANDSCAPE
TECHNICAL SKILLS AND COMPETENCIES (TSC) REFERENCE**

TSC Category	Landscape Engineering					
TSC	Water Features Management					
TSC Description	Manage water features as part of new or existing landscapes					
TSC Proficiency Description	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		LNS-GNM-2023-1.1	LNS-GNM-3023-1.1	LNS-GNM-4023-1.1		
		Perform water features maintenance tasks	Supervise the maintenance of water features	Lead the installation and maintenance of water features by establishing guidelines and requirements		
Knowledge		<ul style="list-style-type: none"> Types of water features and their components Types of tools and equipment related to water movement, filtering and water treatment Types of aquatic flora and fauna used with water features Symptoms of diseases in water plants Methods to test, adjust and treat water Methods of handling aquatic fauna Environmental pollution control and workplace safety and health acts requirements Record management for water features installation and maintenance Personal Protective Equipment (PPE) required for maintenance of water features Relevant Workplace Safety and Health (WSH) guidelines 	<ul style="list-style-type: none"> Types of water features and their components Characteristics and various types of water features Types of tools and equipment for installation and maintenance of water features Methods to mark out shape, depth and dimensions of excavation site Types of aquatic flora and fauna used with water features Methods of handling and managing aquatic fauna Environmental implications associated with soil excavation, installation of drainage systems and water catchment features Methods to test water features for leaks and breaks Water circulation, filtration and treatment systems and methods Personal Protective Equipment (PPE) required for maintenance of water features 	<ul style="list-style-type: none"> Characteristics and various types of water features Tools and equipment for installation and maintenance of water features Installation processes and methods for water features Ideal conditions for species of aquatic flora and fauna used with water features Current and upcoming designs of water features and their advantages and disadvantages Environmental implications associated with soil excavation, installation of drainage systems and water catchment features Risk assessment for the installation and maintenance of water features Principles of project management Relevant Workplace Safety and Health (WSH) guidelines 		

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			<ul style="list-style-type: none"> Relevant Workplace Safety and Health (WSH) guidelines 			
Abilities		<ul style="list-style-type: none"> Wear appropriate PPE before commencing maintenance of water features Check condition of water features in accordance with established checklists and/or guidelines Remove algae and sludge using appropriate equipment in accordance with regulations, guidelines and environmental management Monitor and maintain health and appearance of plants, fish and other aquatic fauna Monitor water features for leaks and/or damages Test water quality in accordance with prescribed parameters Apply treatments for quality of water, control of diseases and pests of aquatic fauna, under supervision Quarantine aquatic fauna and dispose dead fauna as required by environmental pollution control Record information on water quality, treatments and results and actions taken to care for aquatic fauna Adhere to relevant WSH guidelines 	<ul style="list-style-type: none"> Create checklists for the monitoring and maintenance of water features Supervise the testing of water features for leaks and/or damages Supervise repairs of leaks and/or damages to water features Treat water to remove contaminants arising from excavation and installation works Supervise the construction of water circulation system as shown on site drawings Support the construction of drainage systems in accordance with specifications Obtain necessary approvals for commissioning of water features Verify the treatments for water quality, control of diseases and pests of fish and aquatic fauna Verify and analyse information on water feature and its content to provide recommendations Lead adherence to relevant WSH guidelines 	<ul style="list-style-type: none"> Assess potential constraints of the site in implementing water features Lead the research on new designs of water features to understand the difficulties in their installation and maintenance Review the installation of water features in accordance to requirements and specifications Establish guidelines for the maintenance of water features in accordance to environmental and safety requirements Ascertain resources required for the installation and maintenance of water features Set up quality control measures to verify water quality Establish processes for the control of diseases and pests of aquatic fauna Enforce adherence to relevant WSH guidelines 		