# **Job Description**

Position	Water Safety Plan Expert
Objectives:	Develop a Water Safety Plan (WSP) for drinking water supplies aligned to World Health Organization (WHO) guidelines, including training and facilitation.
Background:	As part of assuring the continuous supply of safe, acceptable, and sufficient water to the community, water suppliers in Oman are required to develop and implement a WSP. is subject to this obligation.
	An experienced water quality expert is to be engaged to provide WSP training to NSC personnel, and then to facilitate the development and implementation of an efficient and technically rigorous WSP Manual. The water supply infrastructure includes all water system facilities from catchment to consumer point, including:
	<ul> <li>Seawater and brackish surface water sources and protection from pollution.</li> <li>Wellfield recharge areas and protection from pollution.</li> <li>Seawater desalination treatment and potabilization.</li> <li>Wells and pumps.</li> <li>Chlorination plants for primary and booster disinfection.</li> <li>Treated water storage reservoirs and chlorine contact tanks.</li> <li>Transmission reservoirs.</li> <li>Pump stations.</li> <li>Reticulation pipelines.</li> <li>Customer connections.</li> <li>Water meters.</li> <li>Customer service connection pipelines.</li> <li>Storage and plumbing in buildings of recipients of piped water.</li> <li>Tanker filling stations.</li> <li>Tankers.</li> <li>Customer plumbing systems.</li> </ul>
Deliverables:	Storage and use by recipients of tankered water.  There are four parts to the project with the following deliverables:
	<ul> <li>Project inception         <ul> <li>Agendas for meetings</li> <li>Minutes of meetings</li> </ul> </li> <li>Provide formal WSP training         <ul> <li>Training Presentations</li> <li>Exercise Workbooks</li> <li>Certificates</li> </ul> </li> <li>Development of the WSP, for all regions of Oman         <ul> <li>WSP Manuals.</li> <li>Process flow diagrams.</li> <li>Risk assessment and process control summary tables.</li> </ul> </li> <li>Facilitate the development of WSPs Oman         <ul> <li>WSP Manuals.</li> <li>Process flow diagrams.</li> <li>Risk assessment tables.</li> <li>Process flow diagrams.</li> <li>MSP Manuals.</li> <li>Process flow diagrams.</li> <li>Risk assessment tables.</li> <li>Process flow diagrams.</li> <li>Risk assessment tables.</li> <li>Process flow diagrams.</li> <li>Risk assessment tables.</li> <li>Supporting procedures, tables, and diagrams.</li> </ul> </li> <li>Provide technical support before and after the program         <ul> <li>Emails.</li> <li>Revised documents and procedures.</li> </ul> </li> </ul>

## **Project Tasks and Actions**

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- 1. Project Scoping and Inception:
  - a. Exchange background information between parties.
  - b. Understand the formal and regulatory requirements and hence the obligations that must be met by this WSP program.
  - c. Hold initial interaction to firm up the scope, timing, and refine the project plan.
  - d. Schedule training and site attendance activities and organize logistics and travel.

### 2. Training:

- a. Identify trainees for staff, particularly any personnel that are to form part of the WSP Team and review their backgrounds and starting skill levels.
- b. Develop training materials, adapted from and aligned to WHO guidance, and tailored to suit the local infrastructure and legislative context, and to be understood by the WSP team given their backgrounds and skill levels.
- c. Deliver in-person training over two days using a workshop style interactive problembased training approach, including self-test exercises to help engage the group.
- d. Certify the training for those that were able to attend.

### 3. WSP facilitation:

- a. Assemble the WSP Team and assign roles and responsibilities. These roles and responsibilities will be formally assigned to each department as part of the WSP.
- b. Develop verified system descriptions and process flow diagrams. Conduct field inspections by visiting all of the Oman assets. All site facilities will be visited to collect all the required information and data and to conduct sanitary inspections of infrastructure to assess condition and verify the information. This will cover all seawater and brackish water source waters, well recharge areas, treatment plants, and storage reservoirs, and representative samples of customer connections. Allow up to be determined days of field work.
- c. Summarise relevant aspects of historical water quality data, such as identifying exceedances of guideline values, or unknowns for parameters not tested.
- d. Facilitate a workshop to identify drinking water quality hazards and hazardous events and conduct risk assessments with the WSP Team in the form of tabular summaries. The assessment will consider both quality and quantity, in line with the 2025 WSP guidance from WHO. Allow up to to be determined days of workshops with the WSP Team.
- e. Identify existing control measures, and note improvements required to reduce risks to acceptable levels if there are shortfalls, and document the validation of the process controls.
- f. Summarise operational monitoring strategies for control measures, including setting target criteria and critical limits. This will be set out as process control (monitoring, target, limit, corrective action) in simple format for operators.
- g. Develop the verification monitoring program for water quality, customer satisfaction, and regulatory compliance.
- h. Support development of asset and infrastructure monitoring and management and Standard Operational Procedures (SOPs).

Tasks and actions	
j	i. for routine and incident situations. The SOPs and Emergency Procedures will be prepared by the person responsible for each facility under NSC's guidance.
j	j. Develop supporting programs, such as training, education, asset management, inspection and preventive maintenance of processes and equipment (including calibration of monitoring devices), and material and chemical selection and QA.
]	k. Develop the continuous improvement and revision process.
4. Technical support:	
;	a. Produce the WSP manual and supporting documents to a standard suitable for submission to the public government regulator and auditing department. The WSP manual will be constructed in a simple, straightforward context so as to ensure that it will be easily implemented by the WSP team.