

SOURCE TO TAP SCREENING TOOL AND COMPREHENSIVE ASSESSMENT PILOT PROGRAM

ASSESSMENT GUIDELINE Team Knowledge and Experience Requirements

Module	Assessment Components ⁽¹⁾	Team Knowledge and Experience ⁽¹⁾
1. Delineate and Characterize Drinking Water Source(s)	<ol style="list-style-type: none"> 1. Delineate the drinking water source area. 2. Define the assessment area in which to conduct the water source area characterization and potential contaminant source inventory. 3. Characterize the drinking water source area. 4. Evaluate the integrity and location of the intake/well. 	<ul style="list-style-type: none"> ▪ Hydrology and limnology (surface water sources) ▪ Hydrogeology (groundwater sources) ▪ Wells and well construction (wells) ▪ Spatial analysis and mapping ▪ Public health issues related to drinking water ▪ Water chemistry ▪ Microbiology and microbes commonly found in drinking water ▪ Legislation relating to drinking water, surface water, groundwater ▪ Risk assessment and risk management
2. Conduct Contaminant Source Inventory	<ol style="list-style-type: none"> 1. Review information on historical, existing and potential contaminant sources in the water source assessment area. 2. Conduct a contaminant source survey. 	<ul style="list-style-type: none"> ▪ Hydrology/hydrogeology ▪ Water chemistry, and contaminant fate and transport in surface and groundwater systems ▪ Potential contaminant sources ▪ Spatial analysis and mapping ▪ Public health issues related to drinking water ▪ Legislation relating to drinking water, surface water, groundwater ▪ Microbiology and microbes commonly found in drinking water ▪ Risk assessment and risk management
3. Assess Water Supply Elements	<ol style="list-style-type: none"> 1. Inventory water supply elements. 2. Describe and evaluate the condition, suitability and security of the water supply system from source to tap. 	<ul style="list-style-type: none"> ▪ Operation of drinking water collection, treatment, storage, and distribution systems ▪ Mechanical and electrical works ▪ Assessing the appropriateness or “fitness for purpose” of equipment and procedures ▪ Identifying cross-connections in the distribution system and cross-connection control programs ▪ Influence of drinking water supply elements on water chemistry and microbiology ▪ Public health issues related to drinking water ▪ Legislation relating to drinking water, surface water, groundwater ▪ Risk assessment and risk management

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4. Evaluate Water System Management, Operation and Maintenance Practices	Evaluate: 1. Water supply system management standards and practices. 2. Water supply system operation and maintenance procedures and practices. 3. Documentation and reporting practices. 4. Emergency response and contingency planning practices.	<ul style="list-style-type: none"> ▪ Assessing the effectiveness of drinking water management practices ▪ Operation of drinking water collection, treatment, storage, and distribution systems ▪ Mechanical and electrical works ▪ Operator training and certification requirements ▪ Identifying cross-connections in the distribution system and cross-connection control programs ▪ Drinking water chemistry ▪ Microbiology and microbes commonly found in drinking water ▪ Public health issues related to drinking water ▪ Legislation relating to drinking water, surface water, groundwater ▪ Risk assessment and risk management
5. Audit Water Quality and Availability	1. Analyze raw and finished water quality trends. 2. Verify if current treatment process and practices are effective in meeting tap water quality objectives. 3. Ascertain if the current water supply is sufficient to meet present and future demand for water. 4. Evaluate the adequacy of the current monitoring and reporting program. 5. Evaluate customer vulnerability and satisfaction with the water service.	<ul style="list-style-type: none"> ▪ Drinking water quality monitoring systems and laboratory analysis including: <ul style="list-style-type: none"> - operation, calibration, and recording of continuous monitors - field sampling procedures and techniques - analytical procedures - quality assurance and quality control (QA/QC) - data interpretation ▪ Analyzing water volume and flow data and assessing the adequacy of a current water supply with the projected need for water in the future ▪ Drinking water chemistry ▪ Microbiology and microbes commonly found in drinking water ▪ Public health issues related to drinking water ▪ Legislation relating to drinking water, surface water, groundwater ▪ Risk assessment and risk management
6. Review Financial Capacity and Governance of the Water Service Agency	1. Evaluate governance and accountability structures for the water service agency. 2. Assess the financial capacity of the water service agency. 3. Evaluate whether community growth and development pose a significant risk to the provision of safe drinking water. 4. Describe how the governance structure, organizational capacity, development pressures, and funding influence the physical production of safe drinking water.	<ul style="list-style-type: none"> ▪ Water system governance structures and their implications for financial and management capacity ▪ Financial planning for water supply systems ▪ Drinking water chemistry ▪ Microbiology and microbes commonly found in drinking water ▪ Public health issues related to drinking water ▪ Legislation relating to drinking water, surface water, groundwater ▪ Risk assessment and risk management

1. Source: Comprehensive Drinking Water Source to Tap Assessment Guidelines, March 7, 2005.