

**Table 4-1  
General Response Actions and Identification of Potential Technologies for  
Groundwater Remediation**

<b>GENERAL RESPONSE ACTION/TECHNOLOGY</b>	<b>DESCRIPTION OF POTENTIAL TECHNOLOGY</b>
<p><b><u>No Further Action</u></b> None</p>	<p>No action taken to further reduce risk, including monitoring of groundwater.</p>
<p><b><u>Institutional Actions</u></b> Institutional Controls</p>	<p>Through agreement or other legal mechanisms, would restrict the use or access to groundwater. Applicable water supply within the site is currently available via Wiscasset Water District.</p>
<p><b><u>Environmental Monitoring</u></b></p>	<p>Evaluates the migration and distribution of groundwater contamination over time. This alternative includes a three-year quarterly groundwater monitoring program to establish baseline conditions.</p>
<p><b><u>Groundwater Collection</u></b> Trenches  Extraction Wells</p>	<p>Use of trenches, drains, and piping to passively collect (by gravity flow) contaminated groundwater.</p> <p>Installation of strategically located pumping wells to collect contaminated groundwater.</p>

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<p><b><u>Ex Situ Groundwater Treatment</u></b></p> <p>UV/Oxidation</p> <p>Air Stripping</p> <p>Carbon Adsorption</p> <p>Precipitation/Flocculation/Oxidation</p> <p>Publicly Owned Treatment Works (POTW)</p>	<p>Oxidizes organic compounds in extracted groundwater through the application of ultraviolet light and hydrogen peroxide.</p> <p>Reduces concentrations of VOCs through contact of extracted groundwater with air. Water descends down a packed column while air is forced up the column to promote mass transfer of organics from aqueous to gaseous phases.</p> <p>Reduces concentrations of aqueous phase organics through adsorption onto granulated activated carbon.</p> <p>Processes that remove dissolved metals from the aqueous phase by chemically converting the metals to an insoluble form. The process creates a metal sludge and a treated effluent.</p> <p>Discharge of untreated groundwater to local POTW for treatment and disposal.</p>
<p><b><u>In Situ Treatment</u></b></p> <p>Co-Metabolic Treatment</p> <p>Enhanced Biodegradation</p> <p>Natural Attenuation</p> <p>Air Sparging</p>	<p>The technology includes injection of a dilute solution of primary substrate (i.e., electron donor) into the contaminated groundwater zone to support the co-metabolic breakdown of targeted organic compounds.</p> <p>This technology involves the injection of microorganisms, nutrients, and oxygen or other electron acceptors into the groundwater using injection wells and/or recirculation techniques.</p> <p>Natural processes where contaminant concentrations are reduced by biodegradation, dispersion, dilution, and adsorption.</p> <p>This technology is an in-situ air stripping system that incorporates the injection of air into the saturated zone below contaminated areas. Contaminants dissolved in air and sorbed to soil</p>

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	particles partition into the air phase. The contaminants are then transported in the gas phase to the vadose zone where they are removed via vacuum extraction.
<b><u>Disposal</u></b>	
Groundwater Discharge	Discharge of treated groundwater to on-site location for passive infiltration to the aquifer.
POTW	Discharge of pre-treated on untreated groundwater to local POTW for treatment and disposal.
Surface Water Discharge	Discharge of treated groundwater to an on-site or adjacent surface body.