

**Exhibit 5: Factors Influencing Exposures and Potential Risks**

<i>Potential Hazard</i>	<i>Potential Variables</i>	<i>Potential Mitigation Options</i> <b>N</b> =New schools <b>E</b> =Existing structure
<i>Air Pollution</i> (see Section 8.1)	<ul style="list-style-type: none"> <li>▪ Type and volume of contaminant released</li> <li>▪ Distance from the source</li> <li>▪ Nearby traffic type, fuel, volume and speed (mobile sources)</li> <li>▪ Stack height, facility practices and type of pollution control employed (stationary/point sources)</li> <li>▪ Timing of operations (stationary/point sources)</li> <li>▪ Meteorological conditions (e.g., prevailing wind direction and wind speed)</li> <li>▪ Atmospheric stability and mixing</li> <li>▪ Regulatory compliance</li> <li>▪ Intensity of use</li> <li>▪ Presence of natural or man-made buffers (e.g., trees, hills, buildings)</li> <li>▪ Planning and zoning</li> </ul>	<ul style="list-style-type: none"> <li>▪ Adopt an area-wide approach to address air pollution issues <b>(N/E)</b></li> <li>▪ Maximize distance from transportation or other pollution sources <b>(N)</b></li> <li>▪ Vegetation buffers <b>(N/E)</b></li> <li>▪ Anti-idling policies <b>(N/E)</b></li> <li>▪ Limiting bus or personal car use on and near campus <b>(N/E)</b></li> <li>▪ Enhanced indoor filtration/air cleaning <b>(N/E)</b></li> <li>▪ Locating sensitive activities and outside air intakes away from sources (e.g., locate playgrounds and classrooms away from source; place parking lots, utilities closer) <b>(N/E)</b></li> <li>▪ Timing of HVAC system operations <b>(N/E)</b> or industry operating periods <b>(N/E)</b></li> <li>▪ Limiting outdoor activities during high exposure periods <b>(N/E)</b></li> </ul>
Soil Contamination	<ul style="list-style-type: none"> <li>▪ Type of contamination</li> <li>▪ Extent of contamination</li> <li>▪ Concentration of contamination</li> <li>▪ Depth of contamination</li> <li>▪ Potential transport (e.g., runoff or migration to ground water, air transport)</li> <li>▪ Geology and soil characteristics</li> <li>▪ Water table</li> <li>▪ Access or exposure potential (e.g., dermal contact/ingestion)</li> <li>▪ Barriers (e.g., plants, grass, ground cover, pavement)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Site cleanup and removal <b>(N/E)</b></li> <li>▪ Onsite treatment <b>(N/E)</b></li> <li>▪ Engineering controls (e.g., cap, venting systems, vapor barriers) <b>(N/E)</b></li> <li>▪ Institutional controls <b>(N/E)</b></li> </ul>

Potential Hazard	Potential Variables	Potential Mitigation Options N=New schools E=Existing structure
<p><i>Use of Agricultural Pesticides</i> (see Section 8.12)</p>	<ul style="list-style-type: none"> <li>▪ Use pattern (application rate, crop type)</li> <li>▪ Environmental conditions (wind, temperature, etc.)</li> <li>▪ Toxicity of the pesticide</li> <li>▪ Volatility</li> <li>▪ Persistence</li> </ul>	<ul style="list-style-type: none"> <li>▪ Application of Integrated Pest Management measures to reduce pesticide use (N/E)</li> <li>▪ Choice of pesticide active ingredients (N/E)</li> <li>▪ Oversight and strict enforcement of product label use directions and drift restrictions (N/E)<sup>50</sup></li> <li>▪ Use of drift reducing application technologies and best management practices (N/E)</li> <li>▪ Enhanced indoor filtration/air cleaning (N/E)</li> <li>▪ Locating sensitive activities and outside air intakes away from sources (e.g., locate playgrounds and classrooms away from source; place parking lots, utilities closer) (N/E)</li> <li>▪ Timing of HVAC system operations (N/E)</li> <li>▪ Limit opening of classroom doors and windows during periods of potential spray drift (E)</li> <li>▪ Limiting outdoor activities during high potential exposure periods (E)</li> <li>▪ Notification when pesticides are applied (N/E)</li> </ul>

<sup>50</sup> Buffer zones are specified on all pesticide product labels. The buffer zones provide flexibility based on several factors such as application rate, field size, application method, and soil characterization.

<i>Potential Hazard</i>	<i>Potential Variables</i>	<i>Potential Mitigation Options</i> <i>N</i> =New schools <i>E</i> =Existing structure
Ground Water Contamination	<ul style="list-style-type: none"> <li>▪ Type of contaminant(s)</li> <li>▪ Type and frequency of contact with contaminated water</li> <li>▪ Type of contact with contaminated water/route of exposure (e.g., ingestion)</li> <li>▪ Extent of contamination</li> <li>▪ Concentration of contaminants</li> <li>▪ Extent of vapor intrusion (for certain contaminants)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Seek alternative drinking water sources or install water treatment systems <b>(N/E)</b></li> <li>▪ Restrict access to water bodies <b>(N/E)</b></li> <li>▪ Phytoremediation <b>(N/E)</b></li> <li>▪ Mitigation system for vapor intrusion <b>(N)</b></li> </ul>
Surface Water Pollution	<ul style="list-style-type: none"> <li>▪ Type of contaminant(s)</li> <li>▪ Type and frequency of contact with contaminated water/route of exposure (e.g., dermal)</li> <li>▪ Extent of contamination</li> <li>▪ Concentration of contaminants</li> <li>▪ Stormwater runoff</li> </ul>	<ul style="list-style-type: none"> <li>▪ Improve riparian buffers <b>(N/E)</b></li> <li>▪ Restrict access to water bodies <b>(N/E)</b></li> <li>▪ Green roof, rain gardens and barrels <b>(N/E)</b></li> </ul>
Safety Hazards	<ul style="list-style-type: none"> <li>▪ Frequency</li> <li>▪ Intensity of hazard (e.g., explosion vs. flooding)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Emergency response plans <b>(N/E)</b></li> <li>▪ Emergency shelter design incorporated <b>(N)</b></li> </ul>
<i>Noise</i> <a href="http://www.epa.gov/schools/siting/resources.html#LINKS_noise">www.epa.gov/schools/siting/resources.html#LINKS_noise</a>	<ul style="list-style-type: none"> <li>▪ Distance</li> <li>▪ Timing and intensity of source</li> <li>▪ Presence of natural or man-made buffers (e.g., hills, noise barriers)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Active noise control <b>(N/E)</b></li> <li>▪ Install or preserve noise barriers (e.g., highway barriers or other noise buffers) <b>(N/E)</b></li> </ul>
Odors	<ul style="list-style-type: none"> <li>▪ Timing of operations</li> <li>▪ Meteorological conditions (e.g., prevailing wind direction and wind speed)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Locating sensitive activities and outside air intakes away from sources (e.g., locate playgrounds and classrooms away from source; place parking lots, utilities closer) <b>(N/E)</b></li> <li>▪ Enhanced indoor filtration/air cleaning <b>(N/E)</b></li> </ul>