# Appendix 1. Water-borne pathogens and their significance in water supplies

<table>
<thead>
<tr>
<th>Pathogen</th>
<th>Health significance</th>
<th>Persistence in water supplies</th>
<th>Relative infectivity</th>
<th>Important animal source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bacteria</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burkholderia pseudomallei</td>
<td>Low</td>
<td>May multiply</td>
<td>Low</td>
<td>No</td>
</tr>
<tr>
<td>Campylobacter jejuni, C. coli</td>
<td>High</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Yes</td>
</tr>
<tr>
<td>Escherichia coli – Pathogenic</td>
<td>High</td>
<td>Moderate</td>
<td>Low</td>
<td>Yes</td>
</tr>
<tr>
<td>E. coli – Enterohaemorrhagic</td>
<td>High</td>
<td>Moderate</td>
<td>High</td>
<td>Yes</td>
</tr>
<tr>
<td>Legionella spp.</td>
<td>High</td>
<td>Multiply</td>
<td>Moderate</td>
<td>No</td>
</tr>
<tr>
<td>Non-tuberculous mycobacteria</td>
<td>Low</td>
<td>Multiply</td>
<td>Low</td>
<td>No</td>
</tr>
<tr>
<td>Pseudomonas aeruginosa</td>
<td>Moderate</td>
<td>May multiply</td>
<td>Low</td>
<td>No</td>
</tr>
<tr>
<td>Salmonella typhi</td>
<td>High</td>
<td>Moderate</td>
<td>Low</td>
<td>No</td>
</tr>
<tr>
<td>Other salmonellae</td>
<td>High</td>
<td>May multiply</td>
<td>Low</td>
<td>Yes</td>
</tr>
<tr>
<td>Shigella spp.</td>
<td>High</td>
<td>Short</td>
<td>Moderate</td>
<td>No</td>
</tr>
<tr>
<td>Vibrio cholerae</td>
<td>High</td>
<td>Short</td>
<td>Low</td>
<td>No</td>
</tr>
<tr>
<td>Yersinia enterocolitica</td>
<td>High</td>
<td>Long</td>
<td>Low</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Viruses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adenoviruses</td>
<td>High</td>
<td>Long</td>
<td>High</td>
<td>No</td>
</tr>
<tr>
<td>Enteroviruses</td>
<td>High</td>
<td>Long</td>
<td>High</td>
<td>No</td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>High</td>
<td>Long</td>
<td>High</td>
<td>No</td>
</tr>
<tr>
<td>Hepatitis E</td>
<td>High</td>
<td>Long</td>
<td>Potentially</td>
<td></td>
</tr>
<tr>
<td>Noroviruses and Sapoviruses</td>
<td>High</td>
<td>Long</td>
<td>High</td>
<td>Potentially</td>
</tr>
<tr>
<td>RotavirusHigh’</td>
<td>High</td>
<td>Long</td>
<td>High</td>
<td>No</td>
</tr>
<tr>
<td>Protozoa</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acanthamoeba spp.</td>
<td>High</td>
<td>Long</td>
<td>High</td>
<td>No</td>
</tr>
<tr>
<td>Cryptosporidium parvum</td>
<td>High</td>
<td>Long</td>
<td>High</td>
<td>Yes</td>
</tr>
<tr>
<td>Cyclospora cayetanensis</td>
<td>High</td>
<td>Long</td>
<td>High</td>
<td>No</td>
</tr>
<tr>
<td>Entamoeba histolytica</td>
<td>High</td>
<td>Moderate</td>
<td>High</td>
<td>No</td>
</tr>
<tr>
<td>Giardia intestinalis</td>
<td>High</td>
<td>Moderate</td>
<td>High</td>
<td>Yes</td>
</tr>
<tr>
<td>Naegleria fowleri</td>
<td>High</td>
<td>May multiply</td>
<td>High</td>
<td>No</td>
</tr>
<tr>
<td>Toxoplasma gondii</td>
<td>High</td>
<td>Long</td>
<td>High</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Helminths</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dracunculus medinensis</td>
<td>High</td>
<td>Moderate</td>
<td>High</td>
<td>No</td>
</tr>
<tr>
<td>Schistosoma spp.</td>
<td>High</td>
<td>Short</td>
<td>High</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Appendix 2. General properties of household water treatment systems

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Availability and practicality</th>
<th>Technical difficulty</th>
<th>Cost</th>
<th>Microbial efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling at 100°C</td>
<td>High</td>
<td>Low-moderate</td>
<td>Varies</td>
<td>High</td>
</tr>
<tr>
<td>Chemical treatment (chlorine or iodine)</td>
<td>High to moderate</td>
<td>Low-moderate</td>
<td>Moderate</td>
<td>High</td>
</tr>
<tr>
<td>Solar disinfection</td>
<td>High</td>
<td>Low-moderate</td>
<td>Low</td>
<td>Moderate</td>
</tr>
<tr>
<td>UV lamp treatment</td>
<td>Varies</td>
<td>Low-moderate</td>
<td>Moderate-high</td>
<td>High</td>
</tr>
<tr>
<td>Coagulation/ Flocculation/ Sedimentation/ Filtration</td>
<td>Varies</td>
<td>Low-moderate</td>
<td>Varies</td>
<td>Varies</td>
</tr>
</tbody>
</table>

A multi-barrier approach which uses combinations of these technologies is appropriate in many situations.
REFERENCES


84 VanDerslice J, Briscoe, J. Environmental interventions in developing countries: interactions and their implications.


