Note H(vii): Catchment Assessment Checklist for freshwater recreational areas

The purpose of the checklist is to identify potential catchment risk factors of faecal contamination for freshwater recreational water quality.

Site/area name: ____________________________________________________________________________

Type of site: Lake ____________________________ River/Stream ______________________________

Location: _________________________________________________________________________________

Map references: Latitude ____________________________ Longitude _____________________________

Name of local authority (specify authority responsible) ___________________________________________

Name of person completing checklist (for compiling report): ________________________________________

Check and tick all that apply and note findings for subsequent report.

Part A: Land use

Type of land or human activity affecting the recreational site.

Land cover/geography

- Forest/bush [ ]
- Pasture [ ]
- Urban [ ]
- Wetlands [ ]
- River/stream/irrigation [ ]
- Hilly [ ]
- Flat [ ]

Urban

- Residential (population density) [ ]
- Commercial [ ]
- Military/prison (restricted areas) [ ]
- Industry (please specify) ____________________________ [ ]
- Sanitary landfills/old dumps [ ]
- Other potentially polluting activity (please specify) ____________________________ [ ]

Disposal of human or animal wastes (degree and type of treatment applied – please specify) ____________________________ [ ]
Part B: Rural land use

Indicate the presence of the following for agricultural land use.

- Sheep
- Pigs
- Poultry
- Dairy
- Deer
- Feral
- Beef
- Horses

Is there disposal of animal wastes? (Please specify)
____________________________________________________________________
____________________________________________________________________

Part C: Water uses

Indicate the presence of the following for the recreational site.

- Marina
- Permanent boat moorings
- Boat ramp
- Jetty/wharf

Additional influencing factors

Size of bathing/recreational area:

- Area _________________ m²
- Length _________________ m
- Mean width _________________ m

Is the site subject to seasonal/holiday loading? Yes / No

Direction of prevailing winds _______________________________________________________________

Shoreline configuration/geomorphology/erosion gullies: _______________________________________

Total rainfall:

- Total annual: ______________ mm
- Location of rainfall monitoring station: __________________________________
- Shoreline configuration/geomorphology/erosion gullies: _________________________________
Part D: Microbiological hazards

*Sewage and animal wastes*

Is the water quality in the recreational area affected, or likely to be affected by:

<table>
<thead>
<tr>
<th></th>
<th>Is it present?</th>
<th>Is it likely to cause an effect?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>discharge of untreated human effluent onto or upstream to a recreational area</td>
<td>☐</td>
</tr>
<tr>
<td>2</td>
<td>stormwater outlets with potential sewage contamination / combined stormwater outlet onto or upstream to a recreational area</td>
<td>☐</td>
</tr>
<tr>
<td>3</td>
<td>urban stormwater that is protected from sewage ingress</td>
<td>☐</td>
</tr>
<tr>
<td>4</td>
<td>on-site or other private sewage disposal systems (e.g. septic tank or package plant)</td>
<td>☐</td>
</tr>
<tr>
<td>5</td>
<td>communal sewage disposal or primary or secondary treatment facilities</td>
<td>☐</td>
</tr>
<tr>
<td>6</td>
<td>communal sewage disposal with tertiary treatment facilities</td>
<td>☐</td>
</tr>
<tr>
<td>7</td>
<td>intensive agricultural use in immediate catchment and potential for run-off from untreated animal effluent (e.g. dairying, piggeries, milking sheds etc.)</td>
<td>☐</td>
</tr>
<tr>
<td>8</td>
<td>focal points of drainage, as run-off from low-intensity agriculture/urban/rural catchment</td>
<td>☐</td>
</tr>
<tr>
<td>9</td>
<td>unrestricted stock access to waterways</td>
<td>☐</td>
</tr>
<tr>
<td>10</td>
<td>the incidence and density of birdlife</td>
<td>☐</td>
</tr>
<tr>
<td>11</td>
<td>water craft mooring or use</td>
<td>☐</td>
</tr>
<tr>
<td>12</td>
<td>potential for run-off from feral animals (e.g. forest or bush).</td>
<td>☐</td>
</tr>
</tbody>
</table>

*Indirect influences*

Is there a stream (including a piped stream or tributary) or drain or wetland discharging into or upstream to the recreational area? Yes ☐ No ☐
If ‘Yes’ please answer Questions 13–18.

<table>
<thead>
<tr>
<th>Question</th>
<th>Present</th>
<th>Likely to Cause Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. discharge of untreated human effluent, primary or secondary wastewater treatment plant discharge, on-site or other private sewage disposal systems (e.g. septic tank)</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>14. stormwater outlets with potential sewage contamination / combined stormwater outlet</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>15. communal sewage disposal with tertiary treatment facilities</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>16. high-intensity agricultural/rural activities, incidence and density of feral animal/bird population</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>17. focal points of drainage, as run-off from low-intensity agriculture/urban/rural catchment</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>18. potential for run-off from feral animals (e.g. forest or bush).</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

**Further considerations**

Does rainfall trigger contamination events?  
☐ Yes  ☐ No

Does microbiological water-quality data exceed the national guidelines (550 *E. coli* per 100 mL single sample exceedance) on any occasion?  
☐ Yes  ☐ No

Is there additional information implying risk (such as notified illness related to recreational water activities)?  
☐ Yes  ☐ No

**Note:** If the answer to any of the above microbiological hazard questions is ticked as present, the answer as to whether or not it is causing an effect may be obvious (i.e. discharge of untreated human effluent into or upstream to a recreational area). If, however, it is unclear that it is causing an effect, a more detailed investigation may be required to establish the relative importance of the effect.