Jane Brook

Jane Brook is an ephemeral waterway in a largely natural state, with much of its riparian zone in the upper catchment still vegetated. It drains the Darling Scarp before flowing through the coastal plain and into the upper Swan Estuary upstream of Whiteman Bridge. Strelley Brook, a small tributary of Jane Brook, flows through the largely cleared coastal plain portion of the catchment and into Jane Brook just upstream of the confluence with the Swan.

Soils in the catchment range from lateritic and ironstone gravels in the upper reaches to the east, to red and yellow earths on the western plains. Groundwater tends to have a relatively minor contribution to flow in Jane Brook.

Agriculture is the dominant land use in the catchment. Viticulture and poultry farming are the principal land uses in the lower Jane Brook catchment, while the upper catchment supports pasture. Little native vegetation remains in the lower catchment below the Darling Scarp, which includes expanding areas of intensive housing developments. Large tracts of natural bushland remain in the steep middle catchment along the scarp, including a portion of the John Forrest National Park. The upper catchment above the scarp is rural and urban with patchy areas of bushland remaining. Much of the brook’s fringing vegetation remains intact.

Water quality is monitored at the Department of Water gauging station near the catchment’s lower end, shortly before the brook flows into the upper Swan Estuary. This site is positioned to indicate what nutrients are leaving the catchment and entering the Swan River, so the data may not represent nutrient concentrations in upstream areas.

Jane Brook – facts and figures

- Length: ~ 17.8 km
- Average rainfall: ~ 800 mm per year
- Gauging station near monitored site: Site number 616088
- Catchment area: 137 km² (total), 135 km² (monitored)
- River flow: Ephemeral (June to December)
- No major water supply dams in catchment
- Average annual flow: ~ 9.1 GL per year (2010–14 average)
- Main land uses: Broad acre grazing, viticulture, horticulture, remnant vegetation and expanding urban areas

Nutrient Summary: concentrations, loads and HRAP targets

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<tbody>
<tr>
<td>Annual flow (GL)</td>
<td>7.8</td>
<td>14.1</td>
<td>8.1</td>
<td>9.0</td>
<td>10.2</td>
<td>1.1*</td>
<td>17.4</td>
<td>8.0*</td>
<td>13.2</td>
<td>5.9*</td>
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<tr>
<td>TN median (mg/L)</td>
<td>0.53</td>
<td>0.51</td>
<td>0.72</td>
<td>0.66</td>
<td>0.54</td>
<td>0.64</td>
<td>0.56</td>
<td>0.63</td>
<td>0.43</td>
<td>0.86</td>
<td>0.54</td>
<td>0.61</td>
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<tr>
<td>TP median (mg/L)</td>
<td>0.021</td>
<td>0.025</td>
<td>0.016</td>
<td>0.024</td>
<td>0.009</td>
<td>0.017</td>
<td>0.017</td>
<td>0.021</td>
<td>0.011</td>
<td>0.032</td>
<td>0.019</td>
<td>0.013</td>
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<td>TN load (t/yr)</td>
<td>6.90</td>
<td>12.64</td>
<td>7.06</td>
<td>7.82</td>
<td>9.17</td>
<td>0.72*</td>
<td>16.17</td>
<td>7.48*</td>
<td>13.61</td>
<td>5.08*</td>
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<tr>
<td>TP load (t/yr)</td>
<td>0.11</td>
<td>0.22</td>
<td>0.12</td>
<td>0.12</td>
<td>0.16</td>
<td>0.01*</td>
<td>0.30</td>
<td>0.33*</td>
<td>0.67</td>
<td>0.20*</td>
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- TN short term target = 2.0 mg/L
- TN long term target = 1.0 mg/L
- TP short term target = 0.2 mg/L
- TP long term target = 0.1 mg/L

* best estimate using available data.

For further information please contact the Water Science Branch, Department of Water, catchmentnutrients@water.wa.gov.au

www.water.wa.gov.au