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**Engineering Design Analysis:**

**Open Channel or Flow Applications**

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| **Date:** | Oct 4, 2016 |
| **Project Name:** | Golder |
| **Project Location:** | Bancroft, ON |
| **Engineer:** | Adam Auckland |

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| **Maximum Expected Flow** (cms) | 1.7 cms |
| **Maximum Expected Velocity** (mps) | 6.2 m/s (assuming 0.02 Manning’s roughness) |
| **Channel Bed Slope** (%) | 17% max |
| **Channel Side Slope** (Ratio) | 1:1 |
| **Type of Flow** (normal, overtopping, sub critical, hydraulic, jump, impinging, bridge/culvert, undulating trans critical) | Supercritical (normal) |
| **Bed Width** (m) bottom | 1 m |
| **Alignment** (straight, moderate, severe, extreme) | Straight |
| **Radius at the Crest** (m) |  |
| **Channel/Chute Length** (m.) | 80 m approx |
| **Channel Depth** (m) | 0.7 m |
| **Top Width of Channel** (m) | 2.4 m |
| **Outlet Source** (river, manhole, etc.) | Borrow Pit |
| **Soil Type and Related Conditions** | Sand/Gravel base soil |