General Permit Worksheet
Culvert Placement on Navigable Waterways

This worksheet should be completed and accompany all application materials (Waterway General Permit Application and Approval - Form 3500-108) and any other additional support documents.

Project Start Date (mm/dd/yy): ___________________________________________________

Be aware of the construction season prohibitions:
(A construction waiver must be approved by the local fisheries biologist)
- Trout waters and their tributaries: 9/15 - 5/15
- Warmwater streams North of Hwy 29: 4/1 - 6/1
- Warmwater streams South of Hwy 29: 3/15 - 5/15

Will the proposed project affect the navigational use of the waterbody? Yes [ ] No [ ]
If “Yes”, the following portage will be provided (describe portage): _____________________________________
_________________________________________________________________________________________
_________________________________________________________________________________________

CULVERT SIZING
To be eligible for a general permit without a professionally engineered culvert design, the required culvert area may not exceed 20 square feet. To be eligible for a general permit with a professionally engineered culvert design, the required culvert area may not exceed 40 square feet.

Calculating Culvert area
To determine the required culvert area, 3 measurements should be made: channel width of the stream in feet at the ordinary high water mark ($W_1$), channel width of the stream in feet at the stream bottom ($W_2$), and the height in feet of the ordinary high water above the stream bottom ($H$) (see diagram). These 3 measurements are made at each of 3 locations or transects along the stream: the location of the proposed crossing, 100 feet upstream from the crossing, and 100 feet downstream from the crossing. The individual measurements of $W_1$, $W_2$, and $H$ are averaged to derive the final $W_1$, $W_2$, and $H$ values. The required culvert area is then calculated with the following equation:

\[
\text{Required Culvert area (square feet)} = H \times (W_1 \times W_2)
\]

Culvert area and corresponding round culvert size

<table>
<thead>
<tr>
<th>Culvert area (sq ft)</th>
<th>Culvert diameter (in.)</th>
<th>Culvert area (sq ft)</th>
<th>Culvert diameter (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.80</td>
<td>18</td>
<td>3.10</td>
<td>24</td>
</tr>
<tr>
<td>4.90</td>
<td>30</td>
<td>7.10</td>
<td>36</td>
</tr>
<tr>
<td>9.60</td>
<td>42</td>
<td>12.60</td>
<td>48</td>
</tr>
<tr>
<td>15.90</td>
<td>54</td>
<td>19.60</td>
<td>60</td>
</tr>
<tr>
<td>23.80</td>
<td>66</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The following erosion control measures will be employed:

- Silt fence
- Erosion Mat
- Other __________________
- Seeding/Mulch
- Riprap

State of Wisconsin CULVERT PLACEMENT WORKSHEET
Wisconsin Department of Natural Resources
05/2005