

# Option Summary

Option No.	Option 1	Option 2	Option 3																								
Name	Replace Timber Structure with New Culverts	Replace Timber Structure with New Culverts and Temporary Pumping Capabilities for Significant High Water Events	Replace Timber Structure with Permanent Pump Station																								
Features	<ul style="list-style-type: none"> <li>3 gravity draining concrete box culverts with upstream flow control gates.</li> <li>No modifications to Structure No. 1.</li> </ul>	<ul style="list-style-type: none"> <li>3 gravity draining concrete box culverts with upstream flow control gates.</li> <li>2 culverts modified to facilitate temporary pump installation (100 cfs).</li> <li>Pumps mobilized during a significant high water event.</li> <li>Downstream stoplogs on new and Structure No. 1 culverts.</li> </ul>	<ul style="list-style-type: none"> <li>Permanent pump station with permanent power.</li> <li>3 pumps with total capacity of 150 cfs.</li> <li>Concrete spill channel downstream.</li> <li>Upstream flow control gates.</li> <li>Dam raised 0.7 m over 750 m to accommodate increased downstream water levels from pumping.</li> <li>Structure No. 1 modified with downstream stoplogs.</li> </ul>																								
Pumping Capacity	None	Temporary up to 100 cfs	Permanent up to 150 cfs																								
Approximate change to days above High Water Warning Level vs. Existing Conditions	<table border="1"> <thead> <tr> <th>High Water Event</th> <th>Reduction in Days</th> </tr> </thead> <tbody> <tr> <td>1:10</td> <td>= -19 days</td> </tr> <tr> <td>1:20</td> <td>= -9 days</td> </tr> <tr> <td>1:100</td> <td>= -2 days</td> </tr> </tbody> </table>	High Water Event	Reduction in Days	1:10	= -19 days	1:20	= -9 days	1:100	= -2 days	<table border="1"> <thead> <tr> <th>High Water Event</th> <th>Reduction in Days</th> </tr> </thead> <tbody> <tr> <td>1:10</td> <td>= -26 days</td> </tr> <tr> <td>1:20</td> <td>= -32 days</td> </tr> <tr> <td>1:100</td> <td>= -51 days</td> </tr> </tbody> </table>	High Water Event	Reduction in Days	1:10	= -26 days	1:20	= -32 days	1:100	= -51 days	<table border="1"> <thead> <tr> <th>High Water Event</th> <th>Reduction in Days</th> </tr> </thead> <tbody> <tr> <td>1:10</td> <td>= -34 days</td> </tr> <tr> <td>1:20</td> <td>= -45 days</td> </tr> <tr> <td>1:100</td> <td>= -72 days</td> </tr> </tbody> </table>	High Water Event	Reduction in Days	1:10	= -34 days	1:20	= -45 days	1:100	= -72 days
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Environmental Impacts	<ul style="list-style-type: none"> <li>Minimal</li> <li>Can be managed with construction best practices.</li> </ul>	<ul style="list-style-type: none"> <li>Moderate</li> <li>Environmental License and Indigenous consultation required.</li> </ul>	<ul style="list-style-type: none"> <li>High</li> <li>Environmental License and Indigenous consultation required.</li> <li>Additional habitat destruction due to raising of dike.</li> </ul>																								
Operational and Maintenance Requirements	Minimal	High	High																								
Estimated Construction Schedule	2 to 4 Months	4 to 6 Months	8 to 12 Months																								
Qualitative Cost Comparison	1X	2X	6X																								