Winter Island Hydrodynamic and Particle Tracking Results
June 16, 2017

These slides show peak velocity and exposure time results for Alternatives 3 - 5
Peak Velocity Summary – all peaks for Jan-Dec 2009 simulation occur in January 2009

<table>
<thead>
<tr>
<th></th>
<th>Velocity in main channel near breach, ft/sec</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>West</td>
</tr>
<tr>
<td>Alt 3</td>
<td>-</td>
</tr>
<tr>
<td>Alt 4</td>
<td>3.9</td>
</tr>
<tr>
<td>Alt 5</td>
<td>-</td>
</tr>
</tbody>
</table>
Alt3: Peak Velocity ~4.8 ft/s in channel north of east breach, occurring in January 2009 (peak in channel south of east breach ~4.1 ft/s)
Alt3:
Peak Velocity ~4.6 ft/s in channel near south breach, occurring in January 2009
Alt4:
Peak Velocity ~3.8 ft/s in channel north of east breach, occurring in January 2009
Alt4:
Peak Velocity ~3.4 ft/s in channel near south breach, occurring in January 2009
Alt4:
Peak Velocity ~3.9 ft/s in channel near west breach, occurring in January 2009
Alt 4:
Peak Velocity ~3.5 ft/s in channel near north breach, occurring in January 2009
Alt5:
Peak Velocity ~4.7 ft/s in channel north of east breach, occurring in January 2009
Alt5:
Peak Velocity ~2.1 ft/s in channel near north breach, occurring in January 2009
Alt5:
Peak Velocity ~4.2 ft/s in channel at south breach, occurring in January 2009 (peak in channel NW of south breach ~4.8 ft/s)
Exposure Time

- Particles are dropped every two hours for two weeks starting July 1, 2009
- Particle lifetime is set at two weeks
- Simulation is run for four weeks
- Exposure time results were sorted and plotted (see slide 13)
- Average exposure times:
  - Alt 3 = 2.2 days
  - Alt 4 = 1.6 days
  - Alt 5 = 1.7 days
- Average exposure times are mapped by particle drop location in slide 14