

During the project storm scenario, the freeboard storage and outflow capacity of Petit Lake would cause the dam breach to begin at a level substantially below the top of dam elevation, thus producing a lowered volume and peak when compared to the sunny day scenario. The project storm hydrograph into Sconti Lake would not raise a total project storm breach flow peak to above the level of the sunny day scenario.

Because of the large storage capacity of Petit Lake and the relatively small PMP inflows to both Petit and Sconti Lakes, we are confident the sunny day scenario represents the worst case. The mapped extents of the sunny day model represents the maximum area of flood that would occur for any breach scenario.

Modeling Parameters

Modeling parameters have been developed in accordance with the Georgia Safe Dams Program Engineering Guidelines, 1998 Edition⁽¹⁾. The following breach parameters have been used:

<u>Petit Lake</u>	<p>Starting Water Surface Elevation = Top of Dam (1648 msl) ⁽¹⁾ Breach Base Width = Height of Dam (118 feet) Breach Side Slope = 1:1 ⁽¹⁾ Time to Complete Failure = 0.5 hours</p>
<u>Sconti Lake</u>	<p>Starting Water Surface Elevation = Normal Pool (1464.3 msl, approx.) ⁽¹⁾ Breach Base Width = Height of Dam (40 feet) Breach Side Slope = 1:1 ⁽¹⁾ Time to Complete Failure = 0.5 hours</p>
<u>Covered Bridge</u>	<p>Starting Water Surface Elevation = Calibrated for Initial Conditions ⁽¹⁾ Breach Base Width = Height of Embankment (31 feet) Breach Side Slope = 1:1 Time to Complete Failure = 0.1 hours</p>
<u>Cove Road</u>	<p>Starting Water Surface Elevation = Calibrated for Initial Conditions ⁽¹⁾ Breach Base Width = Height of Embankment (30 feet) Breach Side Slope = 1:1 Time to Complete Failure = 0.1 hours</p>
<u>Cox Lake</u>	<p>Starting Water Surface Elevation = Normal Pool (1276.2 msl) ⁽¹⁾ Breach Base Width = Height of Dam (97 feet) Breach Side Slope = 1:1 ⁽¹⁾ Time to Complete Failure = 0.5 hours</p>
<u>Hwy. 53 in Marblehill</u>	<p>Starting Water Surface Elevation = Calibrated for Initial Conditions ⁽¹⁾ Breach Base Width = Height of Embankment (22 feet) Breach Side Slope = 1:1 ⁽¹⁾ Time to Complete Failure = 0.1 hours</p>
<u>Railroad Bridge in Marblehill</u>	<p>Starting Water Surface Elevation = Calibrated for Initial Conditions ⁽¹⁾ Breach Base Width = Height of Embankment (22 feet) Breach Side Slope = 1:1 Time to Complete Failure = 0.1 hours</p>