

## Wakarusa Watershed Site 24 Sediment Yield Calculations

Original capacity at PS Elevation = 279.9 ac ft

Surveyed Capacity at PS Elevation = 366.2 ac ft

Account for borrow volume in reservoir to construct the dam

|                              |                          |
|------------------------------|--------------------------|
| As-Built embankment volume = | 133,376 cy               |
| Borrow Volume at 1.25C/F =   | 166,720 cy               |
| Less AS Excavation =         | - 4,117 cy               |
| Net excavation =             | 162,603 cy = 100.8 ac ft |

Net original capacity = 279.9 ac ft + 100.8 ac ft = 380.7 ac ft

Estimated Sediment Accumulation = 308.7 ac ft – 366.2 ac ft = 14.5 ac ft

Estimated Annual Yield = 14.5 ac ft / (2009-1974) = 0.4 ac ft/yr.