Table P-14.  Results of the Cottonwood Growth Models
for the EIR Alternatives

| | | | Alternative | | | | |
|---|---|---|---|---|---|---|---|
| | No-Restriction | 6,372-Ft | 6,377-Ft | 6,383.5-Ft | 6,390-Ft | 6,410-Ft | No-Diversion |
| **Rush Creek streamflows** | | | | | | | |
| Mean annual cfs | 25.3 | 38.4 | 48.2 | 60.0 | 69.1 | 84.8 | 84.5 |
| Annual hm$^3$ | 28.3 | 43.0 | 54.0 | 67.2 | 77.4 | 95.0 | 94.6 |
| **Cottonwood radial growth rates (mm/yr)** | | | | | | | |
| Site RC1c | 2.3 | 2.5 | 2.6 | 2.8 | 2.9 | 3.2 | 3.1 |
| Site RC2c | 2.1 | 2.4 | 2.5 | 2.7 | 2.9 | 3.1 | 3.1 |
| Site RC2f | 1.2[a] | 1.4[a] | 1.5[b] | 1.6[b] | 1.7[b] | 1.8[b] | 1.8[b] |
| **Lee Vining Creek streamflows** | | | | | | | |
| Mean annual cfs | 19.0 | 35.8 | 42.3 | 48.6 | 51.8 | 62.0 | 67.0 |
| Annual hm$^3$ | 21.3 | 40.1 | 47.4 | 54.4 | 58.0 | 69.4 | 75.0 |
| **Cottonwood radial growth rates (mm/yr)** | | | | | | | |
| Site LV0f | 0.8[a] | 0.9[a] | 1.0[a] | 1.0[a] | 1.1[a] | 1.2[a] | 1.3[a] |
| Site LV1c | 3.4 | 3.6 | 3.8 | 3.9 | 4.0 | 4.2 | 4.3 |
| Site LV2c | 7.4 | 9.2 | 9.3 | 9.2 | 9.0 | 8.0 | 7.2 |
| Site LV2f | 2.1 | 2.4 | 2.5 | 2.6 | 2.6 | 2.7 | 2.7 |

_____

[a]  Radial growth <1.5 mm/year was associated with severe stress or tree death.

[b]  Radial growth from 1.5 to 2.0 mm/year was associated with low canopy vigor.

Notes:   Streamflow predictions (cfs) are based on LAAMP model results for EIR alternatives.  Flows under the No-Restriction Alternative are actually 0 cfs throughout most years.  The flows used here are averages of infrequent large spilling flows.

The equations are nonlinear univariate equations developed by Stromberg and Patten (1992a, Table 6).

The equations for each site are:

| | |
|---|---|
| Site RC1c | $(0.0146*flow)-((1.16*10^{-5})*flow^2)+1.87$ |
| Site RC2c | $(0.0218*flow)-((5.68*10^{-5})*flow^2)+1.53$ |
| Site RC2f | $(0.0101*flow)-((1.4*10^{15})*flow^2)+0.97$ |
| Site LV0f | $((-1.99*10^{-4})*flow)+((1.03*10^{-4})*flow^2)+0.74$ |
| Site LV1c | $((8.35*10^{-3})*flow)+((9.86*10^{-5})*flow^2)+3.15$ |
| Site LV2c | $(0.264*flow)-((2.78*10^{-3})*flow^2)+3.08$ |
| Site LV2f | $(0.0285*flow)-((1.71*10^{-4})*flow^2)+1.53$ |

Radial growth >2.0 mm/year was associated with high canopy vigor.