# APPENDIX B

## NOTATION

| Symbol | Term | Units |
|---|---|---|
| A | Cross-sectional area | $ft^2$ |
| B | Crest elevation - stilling basin apron elevation | ft |
| $B_c$ | Width of horizontal portion of broad-crested weir | ft |
| C | Discharge coefficient (subscript denotes type) | -- |
| | Isbash coefficient | -- |
| | Cost or losses (subscript denotes type) | $ |
| $C_G$ | Top of gate elevation - crest elevation | ft |
| d | Depth | ft |
| $d_1$ | Depth before hydraulic jump | ft |
| $d_2$ | Depth after hydraulic jump | ft |
| D | Number of days construction area is flooded before cleanup operations can begin | -- |
| $D_{50}$(MAX) $D_{50}$(MIN) | Riprap diameter at which 50 percent is finer by weight. MAX and MIN refers to the upper and lower limits for the allowable gradation. | ft |
| $D_{100}$ | Maximum riprap size | ft |
| $D_G$ | Drop control = top of gate elevation - lower pool elevation. | ft |
| F | Froude number = $V/\sqrt{gd}$ (subscript denotes type) | -- |
| g | Gravitational acceleration | $ft/sec^2$ |
| $G_o$ | Gate opening = vertical distance between gate lip and spillway crest. | ft |
| H | Energy head on spillway crest = upper pool elevation + $V^2/2g$ - crest elevation | ft |
| h | Height of tailwater above spillway crest | ft |
| $H_g$ | Head on gate q H - $G_o/2$ | ft |
| $h_b$ | Height of baffle blocks | ft |

| Symbol | Term | Units |
|---|---|---|
| $i$ | Number of event | -- |
| $k$ | Spillway coefficient of contraction in d'Aubuisson equation | -- |
| $L$ | Length of spillway crest | ft |
| $L_1$ | Distance from beginning of stilling basin to upstream face of the first row of baffles | ft |
| $L_2$ | Distance from beginning of stilling basin to beginning of end-sill upslope | ft |
| $N$ | Number of trials | -- |
| $P$ | Probability | -- |
| $P$ | Probability, approach depth | -- |
| $Q$ | Discharge | cfs |
| $q$ | Unit discharge | cfs/ft |
| $R$ | Radius | ft |
| $SUb_G$ | Gate submergence = upper pool elevation - top of gate elevation | ft |
| TW | Tailwater elevation | ft, NGVD |
| $V$ | Average velocity = Q/A (subscript denotes type) | ft/sec |
| $V_o$ | Initial free jet velocity | ft/sec |
| $W_{50}$ | Riprap weight at which 50 percent is finer by weight | lb |
| $X$ | Horizontal or longitudinal coordinate or distance | ft |
| $Y$ | Vertical or transverse coordinate or distance | ft |
| $\Delta H$ | Difference between headwater and tailwater elevations = H - h | ft |
| $\gamma_W$ | Unit weight of water | $lb/ft^3$ |
| $\gamma_S$ | Unit weight of stone (saturated surface dry) | $lb/ft^3$ |
| $\pi$ | Constant = 3.1416 | -- |