

Intake chambers on the West sided of the upper dam arc filled via large sluice gate openings protected by vertical steel bars and a moving rake that keeps them relatively free of debris. Behind these screened openings are a number of 42" wide by 72" high manually actuated sluice gates.

The<sup>1</sup> sluice gates are numbered from 1 thru 21, Gates 1 thru 14 control water thru the old 10 foot diameter steel pipe. The elevation of the lowest edge of these gates varies from 204 feet above MSL or 220 feet above MSL. Gate 15 was part of the 1914 first phase of construction. This sluice gate is now abandoned, but formerly controlled water enters a 4 foot diameter reservoir drain line that is also to be abandoned. Gates 16 thru 21 control water thru the newer 10 foot diameter PCCP pipe. The elevation of the lowest edge of these gates varies from 190 feet above MSL to 220 feet above MSL.

As long as the level of water in Loch Raven Reservoir is higher than the elevation of Lake Montebello (estimated as normally 225 feet above MSL), water will flow through the pipes and new tunnel to Lake Montebello by the force of gravity. As the level of water in Loch Raven Reservoir falls, the level of water in Lake Montebello must be lowered, by pumping, to keep water flowing through the pipes and tunnel.

Construction was begin to rehabilitate the upper Loch Raven dam to make it able to withstand an inflow of water to accommodate a design rainfall of 31 inches in a 72 hour period as mandated by the Corps of Engineers (COE) in the early 1990's.

Intake chambers on the West sided of the upper dam arc filled via large sluice gate openings protected by vertical steel bars and a moving rake that keeps them relatively free of debris. Behind these screened openings are a number of 42" wide by 72" high manually actuated sluice gates.

The sluice gates and actuators are numbered from 1 thru 21. Gates 1 thru 12, and actuators 13, and 14, formerly controlled the flow of water thru the old 10 foot diameter steel pipe. Gates 1, 3, 5, 7, 9, and 11 are now abandoned. Renvated Gates 2, 4, 8, 10, 12, and actuators 13 and 14 now control this flow. Three of these gates (4, 8, and 12) have a bottom edge elevation of 204 feet MSL. Two of these gates have a bottom edge elevation of 220 feet MSL.

Gate 15 was part of the 1914 first phase of construction. This sluice gate is now abandoned, but formerly controlled water through a 4 foot diameter reservoir drain line that has also been abandoned. The function of this abandoned gate is now performed by a 5 foot diameter valved tap from the newer 10 foot diameter water supply pipe.

Gates 16 thru 21 control the flow of waterr through the newer 10 foot diameter pipe. Four of these gates (18, 19, 20, and 21) have a bottom edge elevation of 190 feet MSL. Two of these fates(16 and 17) have a botom edge elevation of 220 feet MSL. The elevation of the lowest edge of these gates varies from 204 feet above MSL or 220 feet above MSL.

Gates 16 thru 21 control water thru the newer 10 foot diameter PCCP pipe. The elevation of the lowest edge of these gates varies from 190 feet above MSL to 220 feet above MSL.

As long as the level of water in Loch Raven Reservoir is higher than the elevation of Lake Montebello (estimated as normally 200 feet above MSL), water will flow through the pipes and new tunnel to Lake Montebello by the force of gravity. As the level of water in Loch

Raven Reservoir falls, the level of water in Lake Monthello must be lowered, by pumping, to keep water flowing through the pipes and tunnel