

of producing an effluent that could be chlorinated to the required degree of stability at a reasonable cost.

For this location, any filter medium, whether contact bed or sand filter, must have a water tight bottom, so that all filtered effluent can be collected and chlorinated. Without a tight bottom, complete chlorination would not be possible and unstable material would reach the stream by percolation through the underlying gravel beds.

A properly constructed sand filter of adequate size would cost approximately \$7,300.00, which is 2.4 times the estimated cost of the contact bed unit (\$3,000.00), or the sand filter alone would cost from \$2,450.00 to \$3,450.00 more than the combined cost of the contact bed and chlorinating units, and would not insure as stable an effluent.

To recapitulate:

1. Septic tanks plus sand filter = not absolutely stable effluent.
2. Septic tanks plus sand filter plus chlorination = too expensive.
3. Septic tanks plus contact bed plus chlorinator = absolute stability at reasonable cost.

The following regulations are intended to explain the various operations necessary to adapt the plant to handle the variation in loads likely to occur during different parts of the season.

REGULATION NO. 1

In case the discharge from the syphon chambers A or B does not fill the contact bed up to the computed elevation of 5'3" above the floor of syphon chamber "C" then the timing syphon "C" can be regulated to operate for any lesser head as follows: Move the right edge of blow off pipe BP, of the auxiliary syphon to that point where the existing or sub-normal high water line of syphon chamber "C" intersects the curve A.D on the adjusting board, and secure the pipe to the board at that point, by means of a clamp or other suitable device. The movement of the right edge of the blow-off pipe from "N" or normal height to any other position on the adjusting board lowers the height of the water column of the auxiliary syphon that balances the effective head in the main syphon.

REGULATION NO. 2

The correct time for the effluent to remain in the contact bed has been estimated at two hours. Adjust the timing valve "M" so that it will admit enough water into the 6" timing pipe in two hours to trip the syphon. The 1" inflow pipe in the timing pipe can be adjusted to sub-normal high water line elevation by loosening the union which will permit of the pipe being inclined until the opening is at the proper distance below the high water line.

REGULATION NO. 3

The 1" valve controlling the discharge of the liquid from the timing pipe should be so adjusted that the draining of the timing pipe to floor level is completed shortly after the drainage of the contact bed by timing syphon "C" has been completed.

REGULATION NO. 4