

PEMBROKE WATER WORKS

COMPUTER MODEL SIMULATION STUDIES

PEMBROKE, NEW HAMPSHIRE

SFC Engineering Partnership, Inc. (SFC) was selected to provide computer modeling simulations for new developments within the Pembroke Water Works (PWW) distribution system. Based on PWW's existing distribution system model and Water Use Tables published by NHDES, **SFC's** Engineers developed design average and maximum day flows for each new development. Water meter readings of existing facilities were used as a basis to establish water demands of facilities to be expanded. Flow data was entered into the model at appropriate nodes. In addition, the model was run under both average and maximum day demand conditions as well as peak hour and maximum day plus fire flow. Model results were summarized in a report prepared for Pembroke Water Works.

In 2004 **SFC** was again retained, this time to perform engineering evaluations and updates to the WaterCAD Model of PWW's water distribution system. A field survey of hydrant and shut-off valve locations was performed prior to updating the WaterCAD Model to provide as near a continuous work effort as possible. System maps, engineering reports and information of record were reviewed and existing water system maps were digitized to fit the State Plan Coordinate System. In addition, the water distribution system model was updated with respect to groundwater supply wells, pumping systems, storage tank capacity/geometry, and system shut-off valving layout. Pipeline diameters were cross-checked between model values and system map values to confirm accuracy.

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REPRESENTATIVE PROJECTS

