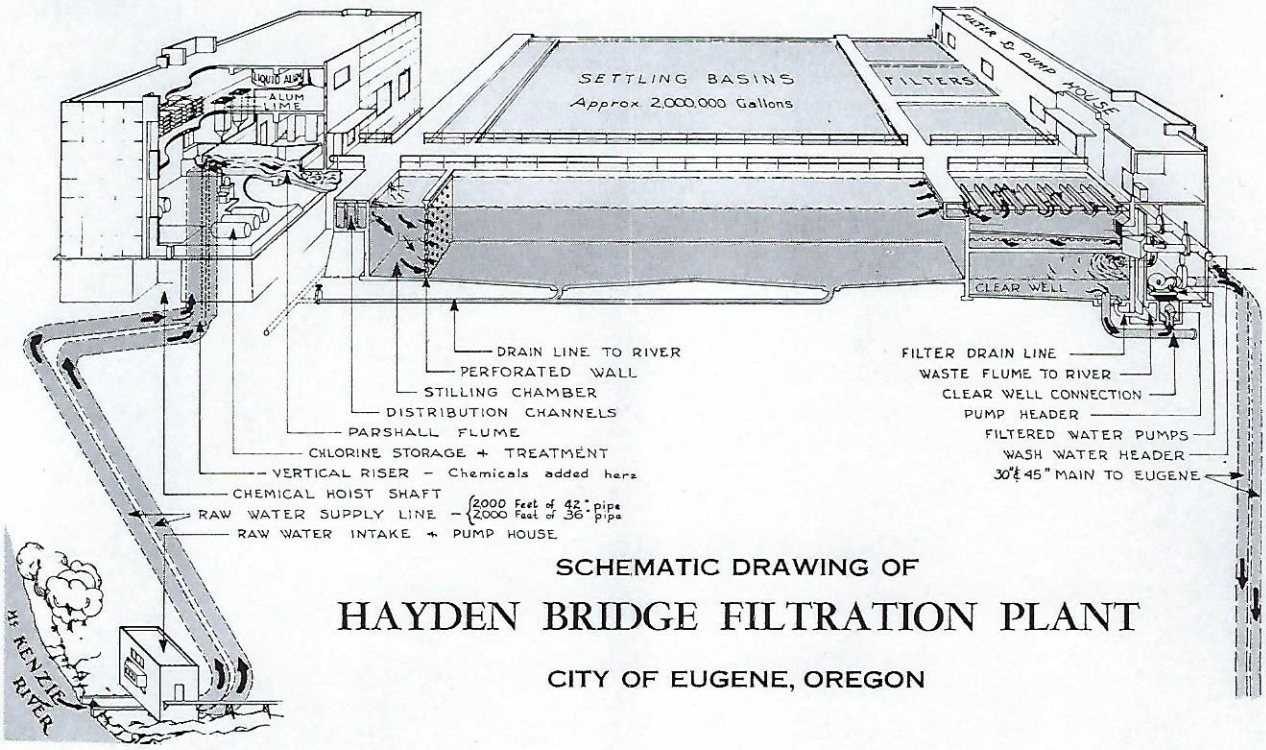
CRYSTAL CLEAR WATER OF CERTIFIED PURITY



SCHEMATIC DRAWING OF

HAYDEN BRIDGE FILTRATION PLANT

CITY OF EUGENE, OREGON

■ The PitCon process of water clarification used by EWEB is considered by water purification authorities to be the first major breakthrough in water filtration methods since 1895. The process was introduced by two GE engineers, Ray Pitman and Walter Conley, at the AEC water treatment plant at Hanford, Wash. EWEB produces water delivered to its customers by the PitCon process.

■ Under most raw water conditions, the PitCon method permits faster filtration than standard rapid-sand procedures. At the same time, PitCon produces filtered water superior to that obtained by the conventional method.

■ When originally constructed, the Hayden Bridge plant contained six filters with standard underdrain systems and 24 inches of quartz sand. Under normal water conditions, the original filters produced filtered water at about 4.5 gallons per minute per square foot of filter, or about 6 mg of clarified water per filter per day. The PitCon process clarifies 9 mg per filter per day and increases the filter capacity of the Hayden Bridge plant from about 50 mgd to more than 80 mgd.

■ The top 16 inches of quartz sand originally installed has been replaced with carefully graded anthracite coal having an effective size of 1.25 millimeters. A properly constructed PitCon filter bed permits practically the entire filter bed to function, compared to only the upper one or two inches in a conventional rapid-sand arrangement.

■ Instituting the PitCon filtration method has increased the filter plant's capacity sufficiently to push back several years the time when extensive additions will be necessary to keep pace with the rapidly growing Eugene metropolitan area.

■ A pilot filter is used to monitor and assist in controlling the coagulation treatment for clarification of the water preparatory to filtration. Precision instruments take the guess-work out of quality control of the finished water. The chlorine residual, for instance, is automatically measured and controlled by a chlorine residual recorder. Also, the turbidity of the water leaving the plant is continually measured to thousands of a part per million by highly sensitive turbidimeters.