

FIRST ANNUAL REPORT

than increase. Life will be protected, litigation will be avoided, and the municipalities will stand on firm ground respecting their rights with regard to water supplies and drainage.

Under central auspices, extended inquiry and experiment into problems of water supply, sewage and sewage disposal would be the kind of valuable data from which local authorities would derive benefit, and the public would understand and demand the blessings of modern sanitary research. A correct moulding of the popular mind, founded on a study of local conditions, is much to be preferred to the intermittent and unintelligent enforcement of general legislation. Annual reports, or, preferably, occasional bulletins describing the conditions of water supplies, sewers and disposal systems and projects would build up a sentiment to have and hold our heritage of water, pure.

The studies required would be systematic examinations of the drainage areas of our principal rivers as to existing or probable pollution from towns, summer residences or manufactories. The sieving, chemical and biological tests at regular intervals would determine the relative purity at different points. The determination of discharge quantities for various river basins would be of service in studying the economic possibilities of streams for future power development. It would also serve to prevent the encroachments of private dams, bridge piers, etc., upon the natural flow area—a fruitful cause of floods.

The disposal of sewage and trade wastes is now demanding a great deal of attention from scientists. The capability of a river to purify itself and the necessity of demanding a more or less perfect degree of purity in drainage entering the streams, are subjects that will engage the best scientific thought of the immediate future.

1. IRRIGATION.—Although the rainfall is very plentiful on Vancouver Island, yet there are portions of the island which require irrigation because the moisture-laden clouds drift over to condense against the Coast range. The irrigation systems, however, are small and generally consist of creeks led on to individual ranches.

Along the coast of the mainland very little irrigation is practised, although the months of July and August are sometimes very dry, and the gravelly soil does not long retain the moisture of the wet months. The islands in the Fraser delta and lower Fraser are protected from the sea by dikes. When the dikes are overtopped by the high water, the result, of course, is a refertilization which is a most important feature of all irrigation.

INLAND NAVIGATION.—The rivers fall down steep mountain slopes and are generally too rapid for any kind of navigation, but the deep