

The number of proposals for tidal plants is very considerable, and while I think I should not take up your time by discussing all of them, it is worth while to examine a few of the more serious ones.

James Saunders discussed, in the "Engineering Review" of London, Eng., three great plants for developments in England; namely, at Chichester Harbor, at the Menai Straits, and in the Bristol Channel. But in each case either the head of the water was too low, or the cost of forming the artificial reservoirs was too great, to make the proposals commercial at present. His most promising scheme is that for the Bristol Channel, where the tidal head is quite sufficient for successful operation but where the cost of forming the great artificial reservoirs that would be required is pro-

home, there have been numerous proposals for obtaining power from the tides at Sackville, at Cape Split, and at the Reversible Falls of St. John. To get *continuous* power at any of these sites, it would be necessary to form large artificial reservoirs, and the formation of such reservoirs is so costly that these proposals are not, at present, commercially feasible.

The Three Main Requirements

The three great desiderata for a tidal plant are:—

- 1.—That there should be sufficient height of tide to obtain a good head.
- 2.—That there should be two natural reservoirs of large size so that continuous power can be obtained.

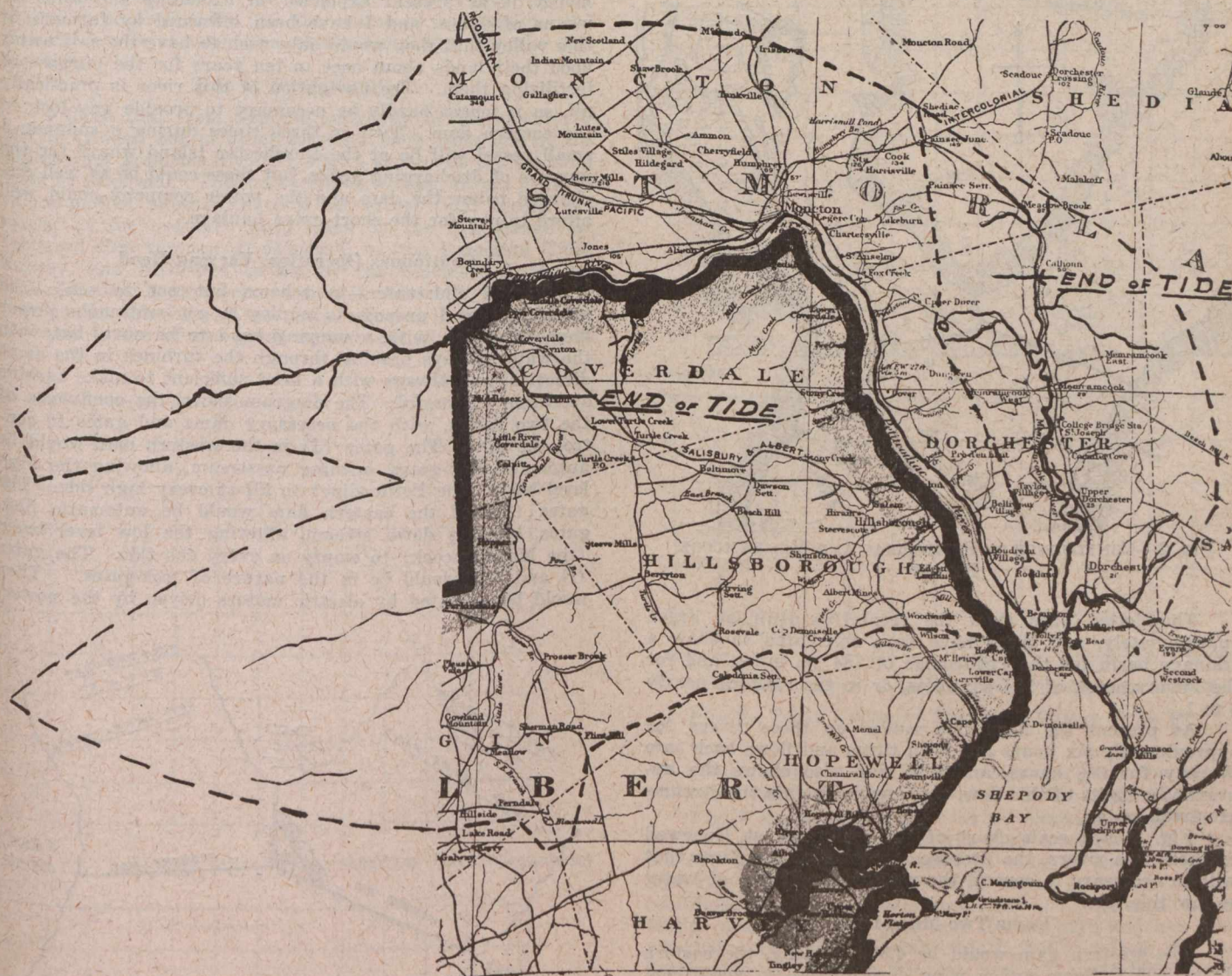


FIG. 1—MAP SHOWING WATERSHED OF THE PETITCODIAC AND MEMRAMCOOK RIVERS

hibitive in relation to the power obtained. The total cost of the plant figured out at \$47,000,000 and the horse-power at 240,000 so the cost per h.p. would be \$196.

Cost Excessive in England

C. A. Battiscombe, before the London Society of Engineers, also made a tidal proposal for the Bristol Channel, but his cost works out at \$237 per h.p., and while neither of these figures would be too high for commercial developments in some localities, they are too high to interest English capital, for England is still a country of cheap coal, and in examining any hydro-electric development we must constantly keep in mind the cost of power from other sources.

Mr. Boving has proposed a tidal plant for the River Dee, but no estimates of costs are given; and coming nearer

- 3.—That the power plant should be central to the population that would be served.

And it is these three desiderata that lead us to suppose that the first great tidal development in the world will take place at Hopewell. Here we have two large reservoirs almost completely formed by nature, we have a tide which is exceedingly regular and that ranks among the highest tides in the world, with a spring rise of 45 ft., a neap rise of 38 ft., and a normal neap range of 32 ft., and we have this power centrally located to a present population of 250,000 who are literally starving for cheap electric power, with no other hydro-electric development in sight, except small ones and those that are too distant from the centres of population to make their development commercial at the present time.

I have examined many other sites for tidal power in those parts of the world where the tides are sufficiently high