

Need of River Improvement For Deep Water Navigation Becomes Growing Necessity

As to the character of the improvement desired, we may say in general that we want free and unimpeded access to the sea, in order that our rapidly increasing commerce may fully enjoy the advantages which our location very near salt water should give us. We are working locally on a plan and we hope in the near future to employ some engineer of national prominence who will make a thorough study of the Skagit River as a whole and submit to us a comprehensive plan for flood control and improvement and stabilization of navigation of the river. These two features of river work seem to us to be closely inter-related.

We are a community of farmers and have not the skill or knowledge of hydraulic engineers. What we suggest therefore, in the absence of expert determination, is a result of our experience with the Skagit River for the past twenty-five years.

The stoppage to navigation is caused by the formation of bars and the lodging of snags either at the mouth of the stream or along its source higher up. These same causes raise the bed of the stream and dam up the water during flood, increasing the high water menace. It seems to us therefore, that a free and open channel to the sea as well as the lessening of flood danger would both be accomplished by the prosecution of three general lines of work.

First, beginning at deep salt water, two rock jetties should be built to the mouth of the river. This will so confine and direct the current that the river will keep this part of its channel scoured. One jetty would not seem to accomplish this, since on emerging from the mouth of the river, the stream would spread out fan shaped at once over the mud flats and deposit its load of silt before reaching deep water.

The second line of work must consist of removing the accumulations which now obstruct navigation. The silt at the mouth and on the bars should, as far as possible, be placed on the banks of the river. Here it will be of use in flood control; while it would merely form a further menace to navigation, if it were flushed on down the stream. The snags and logs should also be removed, since every one of these left in the stream bed is a foundation for a bar. These snags and logs should not be sent on down the river, where they are likely to give further trouble; but they should be accumulated at points on the bank where they can ultimately be burned.

The third line of work should be directed toward lessening the burden of silt and drift carried by the river. We say lessening, for it is practically impossible to remove it all. This line of work is evidently very necessary since with a once open channel it would be much more difficult to maintain this with water heavily laden with silt than with water less heavily laden. It is also evident that this burden of silt could be reduced materially by protecting the points along the bends where the river is constantly eroding its banks. This work of bank protection to prevent erosion, and therefore filling up of channel, is quite as important to the navigation of the stream as the first opening of the channel itself.

As to the relative importance of the north fork and south fork, there is no difference between them as to the chief commerce of the valley. The communities of Fir and Milltown are on the south fork and could not be reached by boat if only the north fork were improved. We call your attention, however, to the fact that the north fork has a short course and steep gradient to salt water; while the south fork has a long course and flat gradient to salt water. From the mouth of the south fork to deep salt water it is five or six miles over mud flats, while from the mouth of the north fork it is less than two miles to deep salt water.

To date all improvements have been with the idea of flood control alone. Thus there has been expended up to the year 1922, but not including that year, the sum of \$1,987,799.10 for dikes and drainage ditches. These dikes have not attained the object for which they were built as during each flood of any magnitude they fail to confine the stream and are broken in numerous places.

Since the 1921 flood there has been some attempt made to take up this river problem along comprehensive lines covering both phases. There is at present a considerable sentiment among the residents and tax-payers of Skagit County in favor of forming an improvement district covering all the territory threatened by the river and adopting some plan for dredging and widening the channel as well as putting