

shipped more cargo in its second year of operation after slackwater was achieved than had been projected for the end of the century.

At Kalama there is a computerized grain elevator where feed corn is loaded at breathtaking speed. The largest load of grain ever shipped on the river was shipped out of this facility. A ship drawing 42 feet moved out in a 40-foot channel. What made that possible is the new river level forecasting system now in place. It has been the plan for some time to eventually deepen the channel. However, because of the cost and the climate of fiscal constraint, better use of the existing resources have been achieved. The river level forecasting system gives ship captains accurate, to the hour, information on the river level.

PNWA is also working with the Corps and Coast Guard to establish new safe anchorages for ships waiting to take advantage of the system. We continue to pursue the concept of extending navigation to Northcentral Washington, on the Hanford reach of the Columbia, through an innovative barge lift system. Explorers once hoped that the Columbia would turn out to be the Northwest Passage. Now we know that it's the Northwest network to the world--and it works.

VESSEL OPERATIONS ON THE COLUMBIA RIVER

BY

PETER J. BRIX

Knappton Corporation

From an operation standpoint, the significant thing about the locks on the Columbia River is that most are 86 feet wide and 675 feet long. Bonneville Lock is 76 feet wide and 500 feet long. This requires breaking up tows at Bonneville, and doubles the number of lockages.

The tows on the shallow-draft portion of the Columbia River are very small compared to those on the Mississippi River. Tows of 10,000-12,000 tons of cargo in 4-5 barges are the most common. The standard locking configuration is two barges side by side and two barges long, and sometimes there is a fifth barge alongside the towboat.

The grain barges have capacities of 3,000-3,500 tons. There are also a number of other barges that are not standard. This causes inefficiencies, and the odd sized barges are being phased out.

The towboats on the Columbia range in size from 2,000 to 4,000 horsepower. These are more comparable to the types of towboats operating on the Upper Mississippi than the larger boats operating on the Lower Mississippi.

The boats have crews of four or five people. This is the result of the short river system and the relatively small number of barges in a tow. Since our barges are twice the size of those operating on the Mississippi, there is less breaking up and making up of barge tows.

The main commodities moving on the Columbia River are grain, oil, logs, other forest products such as pulp, paper and woodchips, and containers. As

manufacturing plants are being developed, the movement of chemicals is increasing, including dry and liquid fertilizer and caustic soda.

The lower section of the Columbia between Portland/Vancouver and the mouth at the Pacific Ocean is a deep-draft river. There is a large volume of log rafts moving on this section. A raft is usually 800 feet long by 60 feet wide, the equivalent of about 80 truckloads. The logs are stored in rafts like floating warehouses until they are ready to be cut or shipped overseas.

One development occurring on the lower Columbia River is more coastwise barging in barges measuring up to 400 feet long by 100 feet wide with drafts of 22-23 feet. Woodchips are moving from coastal locations on the ocean and then up the river to pulp and paper plants. Containers are also moving on these barges.

While the ideas presented for barge-lift systems on the middle section of the Columbia are interesting, there is a question of whether they are economically competitive. We do not think there is the volume of traffic, and, from a rate standpoint, they would not be competitive.

CURRENT DELIBERATIONS AND RECOMMENDATIONS
OF THE INLAND WATERWAYS USERS BOARD

BY

PETER J. BRIX

Inland Waterways Users Board

The Water Resources Development Act of 1986 (PL 99-662) was a historic event for the inland waterways in several ways:

- 1) The log jam of ten years duration which had stopped construction of major inland waterway projects was broken when seven major projects were approved.
- 2) The Inland Waterways Users Board (IWUB) was established to be composed of eleven members selected by the Secretary of the Army.
- 3) The fuel tax on vessels operating on the inland waterways was increased from ten to twenty cents per gallon.

The creation of the IWUB is an extension of the user pay/user say philosophy. PL 99-662 leaves great latitude in the extent and geographical scope of recommendations which the Board may make. The Board can limit itself to reviewing Corps of Engineers investment decisions or it may review investment decisions and the implementation process. The Board looks at the national interest without being parochial. Our role is to look at problems of the inland waterways and to make recommendations for future policies that are best in our independent judgement. The Board is not involved in lobbying for or against projects.

The membership of the Board, seven carriers and four shippers, reflects commodity and geographic diversity and a balance between carriers and shippers. Such diversity will help reflect national priorities and needs throughout the system.