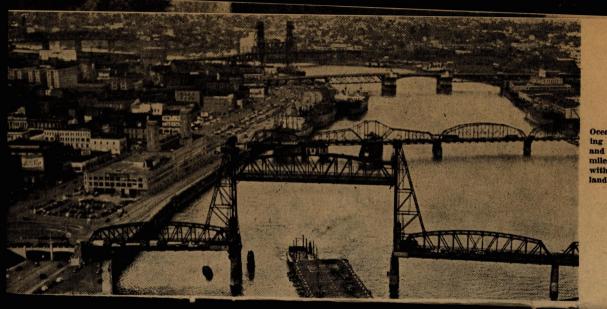
RAMPANT

by Tom Humphrey

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Portland's Only
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Ocean traffic from every seafaring nation comes up the Columbia and Willamette to Portland. Thirty miles of river shoreline, studded with docks, are within the Portland city limits. This series of articles which appeared in the Oregon Journal, April 9-14, 1953, is directed, primarily, at the legendary Columbia bar which has tested the seamanship of ship captains and pilots for 150 years and which now threatens to become a traffic-chocking, nature-made dam across the mouth of the river. Secondarily, it deals with the upstream rapids and other bottlenecks which challenge the amazing expansion of tug-barge transportation.



TOM HUMPHREY, editor of the editorial page, Oregon Journal

The Columbia, an Economic Miracle

THE Columbia river, once called "the mighty Oregon," is many things to many people:

Second largest of North American rivers, for one thing. Rich in historic lore, since Capt. Robert Gray first crossed the bar in the good ship Columbia in 1792.

A highway to the sea and to a great inland empire. First for the Hudson's Bay and Astor fur traders and territorial adventurers of the first half of the 19th century. Then for the sailing ships venturing as far inland as Portland and Milwaukie. Then for the picturesque river boats, mostly sidewheelers and sternwheelers, of Civil war days and beyond. Then for the everlarger freighters and tankers from the seven seas. And finally for the mighty tug-barge combinations that defy the twisting, turning river with its turbulent rapids from Portland to Umatilla and beyond, 300 miles from the sea.

Mythologists who admire the Paul Bunyan stories like to believe that the legendary giant of the Pacific Northwest carved out the Columbia river channel by accident. Babe, his great blue ox, broke away with a plow in a fit of temper, dashing through the mountains to the Pacific. The irregular furrow thus created became the Columbia.

Realists, including students of

geology, prefer the more prosaic

theory that the Columbia gorge

was gouged out by great pre-

historic floods caused by melt-

ing of the North American icecap. They cite the great Dry Falls and the coulees in the Grand Coulee dam area as proof that waters approximating 50 Niagaras plunged over the falls and across the badlands, chewed through the Cascades and headed

irresistibly to the sea.

In any event, the Columbia as we know it today rises in Canada, is fed by such tributaries as the Spokane, the Okanogan, the Yakima, the turbulent Snake. the Umatilla, the Deschutes, the Cowlitz, and, greatest of all, traffic-wise, the Willamette. It meanders southwestward through the Inland Empire, between towering basalt cliffs of the Columbia gorge. It reaches majestic proportions below the mouth of the Willamette, and finally spreads out nine miles wide as it reaches the Pacific below Astoria. It draws upon the snow fields of two great mountain ranges, the Rockies and the Cascades. It is swelled by the generous rains of the Pacific slope. Truly a magnificent river.

Despite man's tampering, it still is one of the truly great salmon streams of the world.

It's great volume (less than 100,000 second feet during low water periods to more than 1 million second feet during great floods) and its rapid fall make it the greatest hydroelectric power stream on the North American continent, its potential only one tenth realized.

It brings the commerce of the world to great fresh water ports such as Astoria, Portland, Vancouver, Longview, The Dalles, Umatilla and Pasco.

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It nurtures the commerce and industry and agriculture of a great four-state region, the home of 4 million people.

VALUE MANY MILLIONS

Its economic value is measured in hundreds of millions of dollars annually.

Its beauty—of gorge and rapids and plunging waterfalls—draws tourists like a magnet.

Within its basin are the nation's greatest forests, some of its richest agricultural lands, its greatest phosphate deposits, many of its best sports fishing streams, many of its greatest light metal and heavy chemical plants, some of its important dock, ship building and ship repair facilities.

The Columbia, in short, is an economic and scenic miracle, created by Providence, improved by man, serving a great region. Sometimes benign, sometimes rampaging. A challenge alike to the thrifty and adventurous, to engineering genius and navigation skill.

You have to travel the river, as I have, by harbor patrol and river tug and pleasure boat and freighter to grasp its greatness.

You have to go from Portland to Umatilla aboard a powerful tug-barge such as Tidewater-Shaver's chartered Rampant to see how man is conquering the river. Through the gigantic locks at Bonneville dam which "drown out" the famous Cascade rapids, Around Celilo falls by means of The Dalles-Celilo canal with its four sets of locks and nine miles of slack water channel.

IN PILOT HOUSE

You have to sit in the pilot house with a river master such as Capt. J. G. Van Ness as he negotiates Hellsgate with a barge loaded with 26 tank cars of gasoline. You have to watch him shoot through the three John Day rapids, virtually "lifting his rig" over treacherous boulders. You have to see him "thread the needle" of lower Celilo locks, with the current shoving your stern around and only about a foot (on either side of your barge) to spare as you enter the channel. Then you understand the challenge of the river.

You have to "ride the ranges," that is, keep the coast guard markers ashore in proper alignment, and watch the channel lights and buoys, and "feel" your way through the shallows and narrows to appreciate the hazards of upriver navigation.

SCAN STATISTICS

You have to wade through reams of statistics to find that some 9 million tons of dry and liquid cargo are moving in and out of Portland and other lower Columbia ports each year and 2 million tons are going to and from upriver ports by tug and barge. Then you discover that another 10 million tons of short haul stuff are moving up and down the Columbia and Willamettte rivers in the form of log rafts, barged paper and fuel, building materials and what have you. Twenty-one million tons in all. Quite a jag of stuff.

You have to talk to army engineers such as Col. E. C. Ichner and Col. T. H. Lipscomb of North Pacific division and Portland district and Robert E. Hickson, jetty expert for the corps, to learn about locks and hopper and pipeline dredging and diverting dikes and jetties and what has been done and must be done to maintain and improve the channel.

THEN YOU UNDERSTAND

Then you have to talk to outstanding bar pilots such as Capt.

Clarence E. Ash of Astoria and veteran river pilots such as Capt. Clyde Raabe of Portland and upriver operators such as Lew Russell Sr., vice president and general manager of the Tidewater-Shaver Barge Lines.

Then and then only do you understand that the Columbia, with all its engineering improvements and navigation aids, with all its jetties and current-diverting dikes, with all its locks and canals, and with all the dredging the corps of engineers has done in the past half century, still is one of the orneriest, trickiest rivers under the sun.

Still untamed.

Still defying freighters and tankers and powerful river boats from its mouth to the mouth of the Snake. Still plaguing the basin with periodic, havoc-wrought floods in which the river swells to 10 times its normal flow.

And, trickiest of all, most hazardous of all (because of its direct and indirect effect upon all river transportation) is the deteriorating channel at the mouth of the Columbia.

Here "the bar" is a headache for shippers and captains from all over the world. Here is a nightmare, Paul Bunyan size, for the bar pilots who must accept responsibility for ships and cargoes worth millions.

Here, despite three jetties and periodic dredging, tide and river and shifting sand have conspired to choke the channel entrance.

Here Clatsop spit is shifting northward into the channel, creating a treacherous dogleg.

RISK OR WAIT

Here the great freighters and tankers, drawing from 28 to 35 feet, must negotiate bar rollers with only a few feet of water under the keel at low tide. Otherwise they ride out a storm or await high tide—at \$2500 upkeep a day—or risk grounding in the swells with resultant damage to bottoms, rudders and propellers.

It is this menacing channel entrance hazard that is attracting the alarmed attention of shipping lines, masters and pilots, port and dock authorities, governors, chambers of commerce, senators and congressmen. This and the proposed remedy will be dealt with in the next article.

Correlative Reading

"Swift Flows the River," by Nard Jones, Binfords & Mort, publisher.

"River of the West," by Robert Ormond Case, Pacific Power & Light company.

"Willamette Landings," by Howard McKinley Corning, Binfords & Mort, publisher.

"Stern Wheelers Up Columbia," by Randall V. Mills, Pacific Books, publisher.

"Lightship," by Archie Binns, Raynal and Hitchcock, New York, publisher.

"Shell Rides the River," by Dick McGinnis, Shell Progress magazine, Holiday issue, 1952.

"Yours Is the River," Inland Empire Waterways association, Walla Walla, Wash.

"The Port of Portland, the Columbia River Gateway to the World," Commission of Public Docks, Portland.

Biennial Report, 1951-52, Port of Portland Commission, Portland.

Nature-Made Dam at Mouth

In Chamber of Commerce and port development circles up and down the Columbia, "bar" has been a bad word.

The handsome brochures and promotional material put out to sell our magnificent fresh water port and dock and shipbuilding and repair facilities on the river make no mention of the bar which has engaged the profane attention of the river captains of the world for more than a century.

The buildup data circulated among world shippers either ignore the Columbia bar entirely or call it the "mouth" of the river or the "entrance channel." They play up the fact that it is deep and wide.

They emphasize the 40-foot, half-mile-wide entrance channel and the 35-foot—500-foot channel from Astoria to Portland harbor.

One of the better Columbia river promotion books of a decade ago, "River of the West," by my friend Robert Ormond Case, gave the bar this treatment:

"Through a marvelous feat of engineering whereby the current itself was harnessed to the job, the bar is non-existent. Jetties constructed by the U. S. engineers at a cost of many millions thrust far out to the sea. The current thus deflected and

controlled has not only scoured out the old bar but creates and maintains a perpetually free channel to a mean depth of 46 feet."

TRUE . . . IN 1940

When that was written, back in 1940, it was essentially true. And it certainly typified most of the wishful thinking of that time. But it isn't true today. There've been some changes made.

We've got a bar down there today, all right, and it's a dilly, to use a much milder term than bar pilots and freighter and tanker captains apply to it. Tide and river have defied engineering marvels and the hopes of port-minded citizens with salt in their noses

Mother Nature has been building a natural dam a cross the mouth of the Columbia in the last 25 years—despite periodic hopper dredging and the three jetties—North, South and Jetty A—with which the corps of engineers has sought to outwit wind and tide and river flow and shifting sand.

The entrance channel has been getting shallower and shallower. Treacherous Clatsop spit has been edging farther and farther northward into the channel.

39 FEET OVER BAR

Thus 39 feet of water is all a ship can count on over the bar (40 feet is the authorized minimum depth) and the shifting sands of the Clatsop spit have forced shipping to follow a dangerous dogleg which takes it perilously close to Peacock spit and the sandy shores of Cape Disappointment.

What makes it worse is this: While the bar has been building up, especially in the past decade, bigger and bigger freighters and tankers have been

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coming into the Columbia. In 10 years, the number of ships entering the river annually with drafts of 30 feet or more has increased from 7 to 398 by actual count.

The number of ships of 28foot draft or more has increased from 96 in 1940 to 803 in 1950.

It takes no seafaring genius to see what this means. Navigation conditions at Columbia bar have not kept pace with the strong trend of American shipping toward ships of greater tonnage, length and draft.

And that spells trouble for owners, ship captains and bar pilots. Plenty of trouble.

A modern ship drawing 28 or 30 feet, riding the swells over the Columbia bar, risks grounding at low tide. And we don't mean maybe. And particularly if one of those "granddaddy" rollers comes along out of nowhere and tosses you around like a chip. You see, the heavier ships are the deeper they stick their noses and drop their tails into the sea.

Several serious and 15 less serious groundings occurred last winter. And if it's stormy, the bar is closed and ships ride it out, costing their owners plenty.

DELAYS BOTH WAYS

In December of 1951, 13 ships waited outside the bar for a total of 339 hours.

In December of 1952 such delays totaled 417 hours. Recently seven tankers were waiting outside when the bar was reopened. One ship waited it out for 48 hours, another for 36.

Comparable losses are experienced by outbound ships waiting inside the river.

And when you figure a day's time lost may cost a big freighter or tanker \$2500, you see what's involved.

And no one knows, neither bar pilots nor army engineers nor coast guard, how many hours or days are lost because ship captains slow down en route to the Columbia entrance in order to come in on high tide.

Some of the big tankers making Portland and other Columbia river ports are "light loading" in order to stay out of trouble. And this is a discouraging and costly business.

ASK FOR DEEPENING

This is why men such as Capt. Clarence E. Ash, dean of Columbia bar pilots, have been hollering for a deeper channel and another jetty since 1939. Army engineers were sympathetic, but pointed out that they hadn't been able to get sufficient appropriations to maintain the channel at authorized depth and width, let alone deepen it to 48 feet as suggested.

But Capt. Ash, the late Merle Chessman, publisher of the Astorian-Budget, and others kept hammering away at the problem. So did the Oregon Journal. Finally Col. (now Gen.) O. E. Walsh of the corps of engineers came in from the Phillipines, went over the bar with Capt. Ash, became interested, and set up a public hearing at Astoria.

That was in 1949. Plenty of factual data was presented, but nothing happened.

Finally, the Portland Chamber of Commerce, the Port of Portland, the Portland dock commission, the port development committee and others became interested. Port authorities at Astoria, Longview and Vancouver got aboard. So did the Portland Steamship Operators association and Inland Empire Waterways association. Chambers

of Commerce at Astoria, Longview and Vancouver ditto. Oregon and Washington senators and congressmen, too. The corps of engineers (Portland district and North Pacific division) made engineering and cost studies which resulted in formal recommendations for the 48-foot channel and jetty B. And this program, estimated to cost \$8.5 million, was recently approved by the board of engineers in Washington.

FIRST STEP

This, however, is merely the first step. There are plenty of bar-type rollers between us and the 48-foot channel. The project must pass the chief of engineers, Gen. Samuel D. Sturgis Jr. It requires approval of Governors Patterson of Oregon and Langlie of Washingtonundoubtedly forthcoming. But rough water lies ahead. Approval of the economy-minded bureau of the budget and finally congressional authorization and appropriation. But at last we're rolling.

It's about time.

Capt. Ash and Robert E. Hickson, jetty expert of the corps of engineers, proved to me by charts that in the past 25 years the Columbia par has doubled in length and has lost 10 feet in depth. River pilots have to maneuver their ships on upriver to Portland through a 350, not 500-foot channel. And all the while ships making Portland and lower Columbia ports are bigger and of deeper draft.

We have a problem, ladies and gentlemen. If we don't solve it, we cannot hope to maintain our position as a great world port (second only to Los Angeles on the Pacific coast) and the proud record we made during the war as ninth port of the nation.

DELAYS AND GROUNDINGS

M. C. Trader, held outside bar by bad weather from December 3 to 7, 1952; towing and repair charges, \$13,400.

SS Venerator, held outside bar until fuel exhausted, December 29 to January 1, 1953; towing and repair costs, \$8000.

P&T Seafarer, grounded in heavy swells October 22, 1952, broke rudder shaft; towing and drydocking repairs, 14 days delay and reloading cost owners \$75,000.

SS Winslow Homer struck bottom on bar, lost rudder; cost of towing, repair and delay undetermined.

SS Buckeye State grounded near Stebco mill in October 1952; no damage but salvage operations cost \$6000.

SS Olympic Pioneer grounded near Willow Point, November 15, 1952; salvage cost, \$4211.

SS Seafair, grounded in river near Warrior Rock, January 8, 1953; salvage cost \$5000.

In addition the U.S. coast guard investigated 15 other groundings in the lower Columbia between September 1, 1952. and January 13, 1953; total damage and delay costs undetermined. Insufficient water was blamed in some cases. Involved were the SS Seaglamor, SS James Cook, MS Rhode Island. SS Alamar, SS Mormacsun, SS Santa Maria, SS Syra, SS Bennington, SS Syosset, SS M. M. Guhin, SS Beloit Victory, SS Romulus, SS Seatiger and SS Illinois

Tug-Barge Rigs Conquer Rapids

THERE is an old saying that rivermen on the brawling Tennessee (before TVA tamed it, of course) had to be "half horse, half alligator" to negotiate its tricky whirlpools

and rapids.

Upriver Columbia boatmen, from the days of the wheezing, wood-burning sternwheelers and sidewheelers to today's mighty diesel-powered tug-barge combinations, have maintained that the Tennessee had nothing on the angry, swirling Columbia and its tributaries whose torrents and white water rapids are the mightiest of them all.

They smile in superior fashion when you ask how the treacherous shoals and hogbacks of the old Tennessee compare with the boiling rapids of the Columbia, Snake and Willamette.

To them the ribald rapids of Muscle Shoals, the Suck, the Boiling Pot, the Frying Pan and the Skillet of the old Tennessee were no tougher, if as tough, in their day as are Hellsgate, John Day, Squawly Hook, Indian, Three Mile and Umatilla rapids on the Columbia—not to mention the unconquerable Cascade, Celilo and Oregon City falls and the death-dealing rapids in the Snake's Hells canyon.

For more than a century these hardy Oregon-Washington-Idaho boatmen have risked their necks and their vessels to beat the turbulent Columbia.

Today's upriver captains piloting such rigs as the Leland James, the Inland Chief and the Rampant, with 2000 to more than 3000 horsepower at their disposal and gigantic barge loads to deliver, are still pioneering the river, much as the captains of old-timers like the Lot Whitman, the Jennie Clark. the Carrie Ladd and the old Nez Perce Chief pioneered the river a century ago with a little jag of freight, a few hardy passengers and a 140-horsepower woodburner at their disposal.

With the help of the army engineers who are building dams and locks in the river and the coast guard which is providing the ranges and other navigation aids, and just plain old-fashioned guts, today's rivermen are conquering the Columbia.

True, today's upriver masters such as Capt. J. G. Van Ness don't have to fight the Indians, as did the old-timers just before the Civil war. They don't carry cannons on deck and rush troops (some of them were headed by young Lt. Phil Sheridan) to the rescue of settlers besieged by Indians at Bradford's store by the Cascades. They don't have to portage their stuff around Oregon City falls, and the Bridge of the Gods rapids and Celilo falls by means of horse and mule railroads and narrow gauge portage locomotives.

Bonneville dam has drowned out the Cascade rapids and the old locks. Locks take them around the falls at Oregon City. The Dalles-Celilo locks and 9-mile canal take them around Celilo—and will until The Dalles dam drowns them out. And McNary dam is flooding out the tough Umatilla rapids.

HAVE THEIR TROUBLES

But today's tug and barge men do have their troubles. Garrison rapids below Bonneville, as a starter. Three Mile rapids above The Dalles. Lower, Middle and Upper John Day rapids which will be there until John Day dam and locks, now authorized but not started, are completed. Hellsgate still is with them. And the humps at Squawly Hook and Rock Creek rapids. They still have to sweat it out in narrow channels and fast water. They still lose a rig once in a while, to fire or flood or boulder-strewn channel.

Just as nothing stopped Columbia rivermen of a century ago, so nothing stops their modern counterparts. They keep right on fighting the river. They keep right on pioneering with bigger rigs and bigger loads and bigger dreams for the future.

Old-timers on the river would be amazed at some of the developments of the past 20 years—the tug-barge era. The loads modern tugs handle upriver would make their eyes stick out. Petroleum barges upstream with 300,000 gallons of gasoline at a crack. Bulk wheat downstream 30,000 bushels at a time. Bulk cement, steel for new dams, fertilizer for Inland Empire farmers, ammunition from Umatilla to the sea and beyond.

BARGES GET BIGGER

Each year the tugs are more powerful, the barges bigger and more ingenious, the cargoes more varied.

Fifteen years ago the upriver traffic load was less than 180,000 tons. Last year it was 1.5 million tons. This year it will be around 2 million tons. And with the reopening of McNary locks and completion of The

Dalles dam and locks the tonnage will go ever higher.

Top-flight rivermen like Lew Russell Sr. and Capt. A. Leppaluoto who run Tidewater-Shaver and Inland Navigation. respectively, and their subsidiaries (the big operators in the upper Columbia) say that when the John Day and Ice Harbor projects are built the upriver tonnage may reach 8 million. It would thus rival present tonnage for the Port of Portland. The head of navigation for heavy barges then would be Lewiston. instead of Umatilla, Attalia and Pasco.

And remember, they're practical men in a tough business.

Incidentally these men and others like them (Herb West, manager of Inland Empire Waterways association included) make it clear that downriver improvements such as the proposed 48-foot channel at the mouth of the Columbia and the new jetty there are as essential as upriver dams and locks—if river traffic is to continue to grow. Anything that helps or hinders lower Columbia traffic helps or hinders upper Columbia traffic and vice versa, they say.

And what's the payoff on this great new tug-barge industry?
Can we afford to spend additional millions of public funds in channel improvements and dams and locks up and down the river?

Frank S. Clay, manager of the Portland Freight Traffic association, in a brief submitted to the house appropriations committee in 1951, supplies one of the answers. He testified in supporting the Ice Harbor dam and locks project that the barge competition provided by Columbia transportation companies since 1930 had kept grain freight

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rates along the river below 1930 levels despite marked general increases elsewhere in the country.

SAVED MILLIONS

He testified that grain growers of one small area of central Oregon and Washington alone had saved \$6 million in freight rates in 16 years. He predicted that barge traffic would reach 3 million tons a year within the next few years.

And Herb West of Inland Empire Waterways association adds that while Columbia barge transportation facilities have depressed the freight rates on grain since 1930, all rail rates (to Portland) not depressed by barge line competition have risen from 72.5 to 79.7 per cent.

West predicts that 3.6 million tons of dry and liquid cargo soon will be moving through McNary locks annually.

Thus river transportation is not only a vital service for shippers in and out of the Columbia; it also is saving millions of dollars in freight rates for the entire region.

All this in addition to \$350 million business ocean-going traffic brings into Portland and other lower river harbors each year.

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21 Million Tons Moved on River

HY should we of the Portland area be concerned about the deeper channel and additional jetty at the mouth of the Columbia? That's Astoria's worry, isn't it?

Why should we fret about a channel for ocean-going ships to The Dalles and 9 to 12 foot channels for barges up to Arlington, Umatilla, Kennewick-Pasco and Lewiston? That's an Inland Empire headache, isn't it?

And why are we so worried—outside the power factor, of course—about completing Mc-Nary and The Dalles dams and locks on schedule and a bout getting John Day and Ice Harbor projects started? They'll be nice for upriver navigation interests, of course, but why do we lose sleep about them?

Actually, Portland harbor area (including neighboring ports of Vancouver and Longview) has more at stake in the Columbia navigation improvements than any other section of Columbia basin.

A CITY is no bigger than its transportation facilities.

And more than 1550 ocean going ships call in Portland harbor each year carrying \$400 million worth of cargo to and from world ports.

Another 2 million tons of cargo move in and out of Portland area by tug and barge bound to and from the Inland Empire.

Still another 10 million tons of short-haul stuff—logs and fuel and paper and building material—move up and down the lower Columbia and the Willamette each year between Portland and Albany.

This is a lot of water traffic—more than 21 million tons of it.

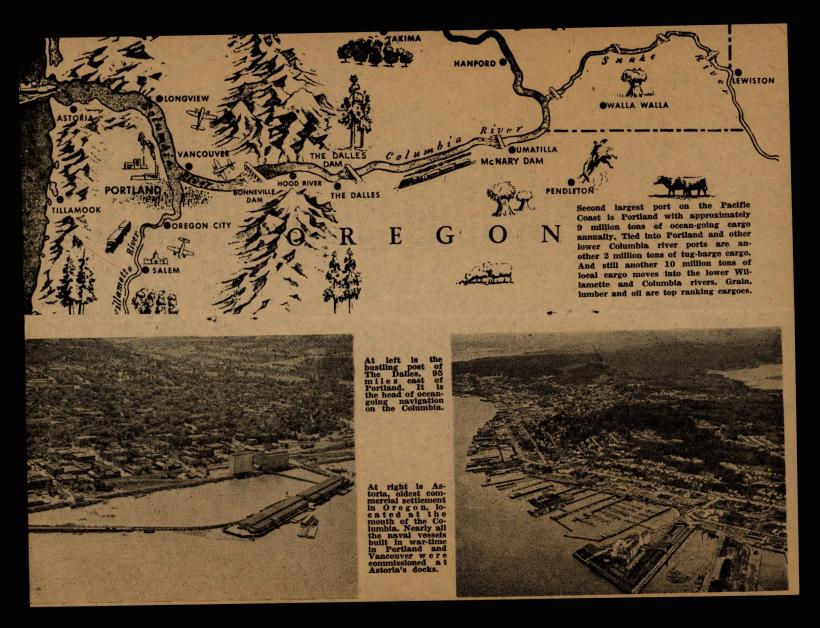
All in all, the cargo involved in this local, upriver and down-river traffic each year is valued at approximately \$2 billion. A tidy sum, any way you look at it. Affecting every phase of activity—agriculture, industry, wholesale and retail business, jobs—in the entire region.

For example, world port traffice and upriver full-time and part-time operations means jobs for 5000 longshoremen drawing \$12 million a year in wages. Ship repair wages averaging \$8.5 million. Another \$1.5 million spent in Portland each year by visiting seamen. Literally millions of dollars in freight rate savings on oil and gas, wheat and lumber each year for Oregon and Washington farmers, industrialists, businessmen and consumers.

ALL THIS business is dependent upon adequate navigation facilities such as channels and locks, jetties and dikes, ports and docks.

If the Columbia channel chokes up at its mouth, so does business in Portland harbor. If upriver channel work isn't done, if new locks and canals do not keep pace with upriver navigation needs, we feel it immediately—and adversely—from Portland to Umatilla.

Of course, we're interested. We're so interested we're



spending millions to provide better port and dock facilities to serve world, inland and local river commerce.

The Port of Portland is just completing a \$3.5 million dry dock facility at the end of Swan Island. A 1000-foot pier on either side of which are giant dry docks that will take vessels up to 12,000 and 14,000 tons. Shop and repair facilities. Steam, water and electrical services. Every modern convenience. Altogether the port has \$23 million worth of port and airport facilities.

The commission of public docks recently completed a \$2 million 1 u m b e r dock in the heart of the city—one of the world's finest. New bulk handling facilities for coal and grain and cement and edible oils and molasses, as well as general cargo. All kinds of piers and trackage and elevators and heavy-lift cranes that will handle anything from wheat to tanks and locomotives. An investment totaling \$22 million.

Portland provides 28 miles of deep water harbor frontage, about half of it occupied by some 30 marine terminals, public and private. Berths for a hundred ships at a time. Plenty of facilities for the 50 shipping companies operating out of this great inland port. And more are coming in.

SURE, we're interested in a deeper channel for the bigger and deeper draft vessels which enter the harbor from all over the world. Sure we're interested in the sensational development of upriver tug-barge transportation. Sure we're concerned with providing every assistance for local towing services.

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River cargo is our life blood.

We have legal, moral, economic and community responsibility for promoting and maintaining, (in co-operaton with the corps of engineers and the coast guard and the congress) our river and harbor facilities.

Nothing is more important to Portland, and the states of Oregon, Washington, Idaho and Montana—to the 4 million people in Columbia basin—than the development and maintenance of navigation facilities on the Columbia and its tributaries.

E. F. Doyle, the "Mr. River" of the port commission, and John J. Winn Jr., dynamic general manager of the Port of Portland commission, say that the economy of the entire region is dependent in large measure upon water transportation. They say that actual damage from groundings and current delays at the mouth of the Columbia, due to shoaling across the bar and along the river channel, are costing plenty.

IF CORRECTIONS aren't made soon, if the bar isn't deepened and the channel maintained at authorized depth and width to Portland, world trade will be driven from our doors and everyone will be hurt—shippers, longshoremen, business and industry and consumers.

Capt. D. J. McGarity, general manager and secretary of the Portland dock commission (now planning additional self-liquidating elevator and dock facilities for shippers, as authorized by Portland voters last fall) echoes these sentiments. He says quite frankly that if our river channel is permitted to deteriorate further, Portland will be unable to maintain its position as one of

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the great fresh water ports of the world-second only to Los Angeles in Pacific Coast tonnage and 11th nationally.

These men point out that we have magnificent facilities and natural fresh water port advantages, but that if we maintain them we shall have to keep ahead of the procession with an adequate channel and up-to-theminute bulk handling and ship

repair facilities.

They say that to Portland the river is like a wheel which cannot function without its component parts. If ships can't get over the Columbia bar, the rim is gone. If the downriver and upriver channel isn't maintained. the spokes are gone. If local and upriver traffic isn't maintained, the hub is gone. And there goes our wheel-and the whole darned economic wagon!

Interested? You bet we are.

We've got to be.

What Experts Say of Channel

E residents of Columbia basin are accustomed to debate over controversial projects. That is our heritage

and our privilege.

I have been amazed to find. however, in talking to people up and down the river, from Astoria to Pasco, complete unanimity when it comes to the necessity for channel improvements, locks and other navigation aids that affect local, regional and world commerce.

People who know the river, people who realize the terrific impact of water-borne transportation upon the economy, are united as they were never united before. They make compelling arguments for the proposed 48foot channel and additional jetty at the mouth of the Columbia. And they are equally vocal and persuasive in supporting upriver improvements such as multiple purpose dams which, with their locks, are making it possible to move vital cargo by tug and barge to and from the great Inland Empire.

Realize Importance

Our congressmen are alert to the importance of these projects and are actively pressing for authorizations and appropriations. Port and dock officials. labor leaders, chambers of commerce, bar and river pilots, steamship operators and uprivermen with their giant tugs and barges are giving the program enthusiastic support. Here are some typical statements:

Hillman Lueddemann, vice president and general manager, Pope & Talbot, Inc., vice president for Oregon, Pacific American Steamship association: "The greatest return from improvement of our inland waterways will come from the increased commerce, growth and prosperity of our people. For example, when the entire Columbia basin irrigation project is developed and settled, it is estimated that more than 6 million tons of additional cargo will be available for water transportation on the Columbia river system. The pattern and unchangeable Wherever low-cost water navigation has become available to a region as a competitive factor. all transportation costs have gone down and the region and its people have enjoyed growth and prosperity."

Senator Guy Cordon of Oregon, member of committee on appropriations: "The board of engineers for rivers and harbors recognized the importance of this project (the 48-foot channel at the mouth of the Columbia) by giving it preferred attention and approval. Projects from various parts of the United States were considered and of a total of 16. full approval at this time was given only 6. It appears that there will not be an omnibus bill reported out of the public works committees in this session but I am hopeful that such a bill will be considered and approved during the second session of the 83d congress. I have explored the possibility of having the Columbia river modification considered as an emergency project and taken up without regard to the established procedure, but at this writing there appears to be little hope that this can be done."

J. R. Bowler, manager Port of Astoria: "The Port of Astoria is extremely interested in securing authorization for the proposed 48-foot channel at the mouth of the Columbia. We are convinced that the future growth and development of this whole area depends very largely on improvements in navigation conditions at the entrance to the river. We see, first hand, the innumerable delays encountered by outbound and inbound ships because of the inadequate depth of the channel over the bar. Thus the necessity for a deeper channel becomes more urgent each year as larger vessels with deeper drafts are being built each vear."

Representative Homer D. Angell, 3d district, Oregon: "I will do everything in my power to secure approval of the project in the public works committee of which I am a member and as chairman of the subcommittee for rivers and harbors. Meantime funds should be appropriated to maintain the channel at its present authorized depth and width which I am sure will be done. The Oregon delegation can be depended on to work together as a unit in securing approval and appropriation of necessary funds.'

H. B. Hart, manager, Port of Longview: "No single project in the Columbia basin could equal in importance and effect upon our economy as would the establishing and maintaining of a 48-foot channel at the mouth of the Columbia. Without such improvement, progress will be stifled. The multiple-purpose dams constructed or planned on the upper Columbia and Snake are very essential, but their use will

be only fractional if the river mouth becomes itself a veritable dam between trade and markets. The natural law of first things first points to a concentration of effort on the river's mouth."

Representative Harris Ellsworth, 4th district, Oregon: "There is no question as to the need of the project and you may be sure I shall work with Congressman Angell and other members of the delegation toward getting favorable action on both the authorization and an appropriation for the work."

Senator Henry M. Jackson, Washington: "I consider such improvements in keeping with the progress vital to the economy of the entire Columbia basin. I do not believe that there should be much trouble to get this project authorized this session; however, appropriations are another matter in view of the balanced budget controversy. I shall continue to work for this and do my utmost to expedite the matter here in Washington."

W. L. Williams, president, Port of Portland commission: "The proposed improvement of the Columbia river entrance and the immediate fulfillment of maintenance of the main channel project to the depths and widths authorized by congress, cannot be delayed if we are to maintain our economic advancement. Continued further development of our rivers to broaden the outlets of this abundant area into the avenues of world trade must be carried on with vigor, if we are to secure and maintain a stable and healthy economy."

Representative Russell B. Mack, 3d district, Washington: "In the Columbia river the Pacific Northwest has one of

North America's greatest navigable streams. The better that stream is developed for navigation by the largest ships, the more the Pacific Northwest will prosper and the larger the contribution its people can make to the general prosperity of the nation. I am confident that every Pacific Northwest member of congress of both parties will work for making the Columbia an even better navigation stream by seeking authorization and appropriations for the navigation development projects for this river which, wisely, have been approved by the U. S. army engineers."

Carvel Linden, president, Portland Chamber of Commerce: "The Portland Chamber of Commerce is primarily concerned at the moment with correcting the unfortunate situation with respect to the Columbia river channel entrance and proper maintenance of the channel upriver. The project depth is 40 feet, but with ships of current day deeper draft, greater depths are needed in heavy seas. River transportation is effecting savings for the people of the region and of America of \$14 million to \$15 million annually. That savings amounts to a return of approximately 331/3 per cent on a total investment in channel improvements of \$40 million A recount of the present savings alone should be sufficient to convince the congress that additional appropriations will be wisely expended."

Representative Sam Coon, 2d district, Oregon: "I realize the improvement of the navigation channel would be valuable to areas all the way up the river, since anything that helps navigation on the Columbia river naturally operates to benefit eastern Oregon and the entire

Northwest. Increasing river commerce is necessary for full development of our agricultural lands, forests, minerals, fisheries and other natural resources of Columbia basin. This project also is important in the defense effort."

Representative Walter Norblad, 1st district, Oregon: "I was, of course, delighted with the initial recommendation of the army engineers of Portland and subsequently the decision of the board of review here in Washington for undertaking our Columbia river and bar project. I shall do everything I possibly can to see that this project is put into effect, but it should be realized that it cannot be accomplished overnight. If approved by the budget bureau and sent to congress, we are than in position to argue our case before the appropriations committee and would have. I believe, a very good chance for success. I will be in the front row pushing it just as hard as I can."

"Capt." Lew Russell, vice president-general manager. Tidewater-Shaver Barge Lines: "If we can't get large vessel loads over the bar it limits traffic into and up the Columbia. Eventually it will divert traffic to Seattle and San Francisco and hurt the entire area. A lot of tankers are coming in light now. It's elementary. With modern tugbarge equipment, revival of river traffic on the Willamette will be amazing. With adequate lower river channels and completion of upriver dams and locks, we'll see ocean - going barges (2000 to 3000 tons) going all the way to Pasco the year around. I predict 8 million tons of stuff will then be moving up and down river, as compared with 2 million tons now."

Capt. C. E. Ash, dean of bar pilots. Astoria: "I've been actively agitating for this deeper channel since 1944. I can prove by charts that the entrance channel bar has doubled in length and lost 10 feet in depth in the past 25 years, while ships get bigger and bigger. Thirtynine feet on the bar is murder. Delays are averaging 10 to 15 hours. We've been so busy building big dams up the river that we've neglected the dam Nature is building at the mouth. It's no use to kid ourselves. We've got a bar down here. It's 50 per cent worse than it was 25 years ago. And it's making life miserable for bar pilots and ship captains."

Herb West, executive vice president, Inland Empire Waterways association, Walla Walla: "Improvements at the mouth of the Columbia are of great concern to the whole Inland Empire area. If they aren't obtained, it will hurt the entire region, this area even more than the ports of the lower Columbia."

Capt. A. Leppaluoto, general Inland Navigation manager. company: "The importance of providing a 48-foot channel and additional jetties at the mouth of the Columbia river cannot Without be overemphasized. this project the Columbia river would be at a disadvantage with other harbors such as Puget Sound, due to the reluctance on the part of ship operators to bring their ships into the Columbia river. This would be, first, because of the danger of striking bottom and, second, because of the cost factor. The very economy of the cities of Portland, Vancouver and Longview are in the balance at this

moment on whether the Columbia river ports shall remain a major shipping center with other Pacific Coast ports or whether they will be relegated to a secondary position."

Capt. D. J. McGarity, general manager, Portland commission of docks: "The importance of the deepening of the channel at the mouth of the Columbia river and the maintenance of the Columbia river channel from the sea to the inland area cannot be overemphasized. The future growth of the Port of Portland and other Columbia river ports is not only closely allied with the Columbia basin hinterland and the Willamette valley but also is, to a large extent, dependent upon them. Accordingly the developments of river channel improvements should be encouraged and promoted with extreme vigor."

George C. Cadwell, president. Fort of Vancouver board: "Navigation facilities on the Columbia (at the mouth and upriver) must be greatly improved: otherwise the economic growth of the region will be seriously retarded. Northwest agriculture and industry depend in great part upon water transportation for marketing their products and the development of Northwest manufacturing, particularly electro-process industries, is tied to the ability of the shipping industry to supply basic raw materials realiably and at low cost. Moreover, the Northwest, through water-borne shipments, has in recent years met some of the most acute needs of foreign nations, particularly for grain and lumber."

Kit C. Conyers, executive vice president, West Coast Trans-Oceanic Steamship line: "The continued prosperity and advancement of Oregon, its productive Willamette valley and the entire Columbia and Snake river areas of Washington and Idaho are dependent upon a deep, safe and adequately maintained channel to the Pacific ocean. The Columbia river is the lifeline to world markets for the agricultural and industrial products of this area. During post-war years there has been a marked deterioration in the conditions of the Columbia river entrance and the channel upriver from Portland. We must be alert to correcting this condition by fighting for establishment and maintenance of a 48foot channel at the river entrance and a year around depth of 35 feet in the Columbia river channel to Portland. When Bonneville dam was built it contemplated the transiting of seagoing vessels to The Dalles. We should bring strong pressure to bear to have similar facilities installed quickly in The Dalles and McNary dams."

D. T. Siddall, ILWU, local 8: "Maintenance of the Columbia river channel to 35 feet from the mouth to Portland, and deepening the bar clearance to 48 feet, should be of great importance to all workers in the state of Oregon. Large foreign ships, with deep draft, now face the prospects of having to stand by outside the bar in rough weather, owing to the shallow depth of the bar and channel. Rather than face this delay, these ship operators do not make this fresh water port a regular port of call. Thereby, this area loses the imports which would be discharged, distributed and used in the manufacture of by-products, all by local labor. Also, we lose to other areas the manufactured products and raw materials which would be assembled and

shipped to ports all over the world.

"More foreign commerce in this port would stimulate not only agriculture, but manufacturing of finished products as well, which would increase the manpower need in every walk of life."

Senator Wayne Morse, Oregon: "Under the circumstances, it is my opinion that the \$81/2 million project (at Columbia bar) will materialize only if we can make a very strong case in support of its military and defense significance. It seems to me, however, that a good many arguments can be advanced in favor of the defense and military significance of navigation on the Columbia and Willamette rivers. I shall give this particular aspect of the problem careful analysis and study, and I intend to do my very best to make certain that the proposal has adequate consideration on its merits when it comes to the senate for action."

Capt. Clyde Raabe, veteran river pilot of Portland: "The larger ships of today make these new channel improvement projects imperative. In the past four years, especially, the army engineers have had their funds for channel work cut every year. We have a 35 by 350-foot channel most of the way to Astoria, but 500 feet on turns only. And there's a real problem at the mouth of the Columbia. We've got to keep the steamship people, the chambers of commerce, the army engineers and our congressmen stirred up. We have to let them know our channel is going to hell."

Capt. Raabe should know. He's been working 58 years on the river.

What's Necessary To Save Channel

WELL, where do we stand, navigationwise, on the Columbia river?

A study of the historic record and existing statistics and my interviews with army engineers, port and dock authorities, coastal, intercoastal and world shippers, chambers of commerce, congressmen, bar pilots, river pilots and tug-barge men disclose these facts:

First, we have a \$2 billion water-borne business tied into the Columbia and its principal tributaries, the Willamette and Snake rivers. Directly affected are the transportation service, freight rates, pay rolls and economy of the entire Pacific Northwest. Touched directly are the lives of 4 million people.

Second, we've made tremendous strides in developing world, inland and local commerce on our rivers—21 million tons of it annually.

This development has been made possible by (1) the 40-foot channel (½ mile wide) at the mouth of the Columbia river, (2) the 35-foot, 500-feet-wide channel from Astoria to Portland harbor 110 miles inland, (3) navigation locks at Oregon City (1873), the Cascades (1896), The Dalles-Celilo (1915), Bonneville dam (1937), making Cascade locks unnecessary, and McNary dam (1953).

RAMPANT RIVER

The Astoria-Portland channel was improved by stages, first to 20 feet, then to 25, 30 and 35 feet as the need developed. Width was increased from 300 to 500 feet.

Locks at The Dalles dam are scheduled to be available in 1957 or 1958, depending upon congressional appropriations. Locks at the John Day and Ice Harbor and other lower Snake dams are projected, with no appropriations in sight. Eventually, locks at Rock Island and Priest Rapids, above the mouth of the Snake, would make service to Wenatchee valley possible.

Third, we have developed, to serve this ever-increasing river traffic, adequate port, drydock, ship repair and shipbuilding facilities, navigation aids, automatic and bulk handling equipment. We have elevators for grain, tank farms for oil, silos for cement, storage for anything that may be thrown at us in the form of general, dry or liquid cargo, incoming and outgoing.

We can accommodate steam and motor-driven freighters and tankers from all over the world in our fresh water harbors.

Where ocean-going traffic leaves off, heavy tug-barge traffic begins, moving as far inland as Lewiston, Ida.

Since Bonneville, a 27-foot channel to The Dalles has been authorized, but there has not been sufficient demand to justify completion of the work. A 15-foot minimum has been maintained for barge traffic.

All this is favorable.

A great navigable river with areat facilities.

A vast region that is growing, agriculturally and industrially, at a phenomenal rate, placing ever

RAMPANT RIVER

greater demands upon its water transportation.

Prospects unlimited.

HALF OF PICTURE

But that is only half the picture. Here's the other half:

First, tide and wind and river are busily building a natural dam at the mouth of the Columbia. "The bar," we call it.

Periodic spring floods bring millions of yards of soil and sand downriver, shoaling and changing our channels.

Despite periodic dredging, current-diverting dikes and jetties (that constrict the flow of the river and make self-scouring easier) the channel on the inside navigation range has become narrower and shallower. What really makes it tough is the fact that the channel alignment at Clatsop spit has shifted and while deeper water is found near the north shore, southwest winds make it hazardous to use.

Clatsop spit, fed by shoaling sands, has moved farther and farther northward into the channel, creating a hazardous dogleg

Peacock spit on the north shore, once a shallow barrier, has become deeper, thus permitting rollers to break farther and farther inside the river.

Meanwhile ships are becoming bigger and bigger, their drafts deeper and deeper. Groundings that do real damage, delays that cost thousands of dollars are the consequence.

BUT FUNDS LACK

Congress has authorized the corps of engineers to maintain the entrance channel at 40 feet, but has not provided sufficient funds with which to do the job. Thirty-nine feet on the navigation ranges is all ships can count on at low tide. And that

isn't enough — not nearly enough.

Second, the channel from Astoria to Portland harbor, supposed to be 35 feet deep and 500 feet wide all the way, is neither at some points. Eureka channel near Clatskanie, for example, is only 34 feet deep over the bar in the main channel and 32 to 33 feet deep on either side.

At low tide, there is only a 33-foot channel in the Willamette from its confluence with the Columbia to Broadway bridge. Before last summer's dredging it was 31 feet in spots.

In some areas between Portland and Astoria, river pilots say it is dangerous for two big ships to pass or to maneuver. The bottom width, instead of being the prescribed 500 feet, is nearer 350.

As salty River Pilot Clyde Raabe of Portland (58 years on the river) so aptly describes it: "Our channel is going to hell."

Third, another serious bottleneck for upriver traffic exists at The Dalles-Celilo canal. The locks are so small that the big tug-barge "combos" can barely get inside them. Only one barge can be handled at a time. The entrance to the lower locks is a nightmare.

This situation will obtain until The Dalles dam and locks are completed, and the old locks and canal will be drowned out forever.

None of these handicaps to river transportation is attributable to the corps of engineers. They've done a magnificent job with the funds made available by the congress. They broke a record in developing plans and cost estimates on the Columbia bar project.

But year after year, only two thirds of the budget necessary to maintain Columbia bar and Columbia and Willamette channels to Portland-Vancouver at authorized widths and depths, has been appropriated by the congress.

Last year, for example, the corps requested \$336,000 for work at the mouth of the Columbia. It got \$297,000. It requested \$1,845,000 for up-river channel work. It got \$1,331,000.

ALWAYS THE SAME

Fortunately a supplemental appropriation of \$385,000 was obtained for dredging in Portland harbor. And did we need it!

But the story, year after year, is the same.

The corps has to "divide its shortages" as best it can, on the Columbia as well as elsewhere in the nation. Last year's "shortage" was a cool \$33 million, nationally speaking, after the congress cut requests from \$100 million to \$67 million.

WHAT TO DO?

Now what can be done about this threat to the water-borne commerce and economy of this great region?

FIRST, every effort can be made to obtain authorization of and appropriations for necessary works at the mouth of the Columbia. These basic improve-provements include the 48-foot entrance channel and a fourth jetty (jetty B) on the Washington side of the river.

SECOND, exert every bit of influence that can be mustered to obtain sufficient maintenance money to permit the corps of engineers to maintain the Columbia entrance and upriver channels at authorized depths and widths. This is less dramatic than the new projects. It gets less publicity. But it is more readily attainable at this session of congress, fretting as

it is about balanced budgets and taxes.

THIRD, keep driving for the earliest possible completion date for The Dalles dam. A year's delay there will be very expensive in power and navigation benefits. Some say it could add \$20 million to the overall cost of the project. And don't forget the John Day Dam and the lower Snake projects that will make year-around tug-barge traffic to Lewiston possible.

Time, in each instance, is running out.

Remember, even if the congress were to authorize the appropriate funds tomorrow for the \$8.5 million dredging and jetty project at the mouth of the Columbia, it would take approximately 2½ years to complete the work.

Dredging at the outer bar and on Clatsop spit is seasonal. Because of winter storms, it can be done only in summer. And even in summer, there are times when dredging is impossible because of the rollers. The jobremoval of some 18 million cubic yards of sand by means of hopper dredges—may take three seasons with two dredges.

Rock required for the new jetty, extending southwestward from Cape Disapopintment into the river, will total 1.6 million tons. Core material is available nearby, but armor rock must be brought in from outside. A big job. A two-year job, probably.

OUR CHANCES?

And what are our chances of obtaining both authorization and appropriations at this session of the 83d congress?

Chances for authorization are good, according to Oregon and Washington delegations in the congress.

Chances for getting sufficient

money to do the job aren't so good, though opinion is divided.

Some say it would be "miraculous" to get both at this session. Others believe it might be done, if the bure au of the budget and the congressional committees can be made to see the supreme importance of the project and the critical time element.

One possibility, of course, is to persuade President Eisenhower that, because of national defense angles, emergency measures are necessary.

Another possibility, suggested by Capt, Raabe, is to seek a separate appropriation, outside the omnibus rivers and harbors bill, for necessary Columbia and Willamette projects.

Still another possibility is to seek authorization for the entire project and funds (approximately \$3 million) for the dredging phase, leaving the jetty job for later. It is possible, just possible, that the dredging of the outer and inner bars might do the trick. My engineer friends do not all agree on this one.

In any event, let's hope that everyone in the Columbia basin -in Oregon, Washington, Idaho Montana—will give his congressmen and governors full support in an effort to obtain necessary maintenance funds for the coming year. For example, if maintenance funds were adequate, the corps could go to 42 feet on Columbia bar without further authorization. A two-foot variation is permitted. And that would help tremendously.

So why not write your senators and representatives — wherever you live? Give them some moral support. They're fighting your battle. Let them know that

you're for them in their effort to save the Columbia river channel from disastrous deterioration. Let them know how important you think it is to speed work on upriver dams and locks.

Your economic future is at stake.

And don't let anybody kid you into believing that this Columbia river and harbor work is just another "pork barrel" deal.

For every \$1 in cost of the Columbia bar improvements alone there's \$1.69 coming back in direct benefits-benefits to the people of the United States, as well as those of Columbia basin.

The gross value (direct and indirect) of the deep channel from the mouth of the Columbia to the Portland-Vancouver harbor area, as measured by lesser water transportation costs, is estimated at approximately \$141/2 million a year. The annual cost of establishing and maintaining channels, jetties, dikes and other navigation improvements, \$2.3 million. Net annual value, \$12.1 million. That's a benefit to cost ratio of 6 to 1!

Until allocations of cost are made on McNary and The Dalles dams it is impossible to make an accurate estimate of the benefits to cost ratio, but it is expected to be at least 11/2 to 1.

What's wrong with that? Uncle Sam will have to look a long way to find a better investment than helping us tame our rampant river.

The End

The Journal's current campaign for improved navigation facilities on the Columbia and its tributaries is in the best Journal tradition.

Shortly after The Journal was acquired by C. S. Jackson in 1902, he personally retained an English engineer, William Bailey, to study a new type of ocean-going dredge successfully operating on Liverpool's Mersey bar and channel. Bailey's report to Jackson was followed by a battle in congress, inspired by The Journal and its publisher, which successfully quadrupled army engineers' appropriations and instituted work on the Columbia bar. Jackson also was successful in his fight to obtain rail rate differentials for the water-level Columbia Gorge approach to the sea.

Throughout its entire history, The Journal has crusaded for good government and development projects in the public interest. Today, The Journal under the guidance of its present publisher, William W. Knight, continues to be a newspaper dedicated

to the public service.



by Tom Humphrey

Compliments of the

OREGON JOURNAL

Portland's Only Home-Owned Newspaper