Re Improvement of Siletz River Bar and Entrance
and Drift Creek, Oregon

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31 August 1948

Subject: Report on additional information on improvements of Siletz River Bar and Entrance, Oregon.

To: The Resident Member,
Board of Engineers for Rivers and Harbors,
Washington 25, D.C.

1. Introduction. - The following report is submitted by the Port of Newport in response to your Public Notice on investigation of the advisability of Federal improvement of Siletz River Bar and Entrance, and Drift Creek, Oregon, dated March 24, 1948, and letter of Colonel W.S.Moore, Resident Member, dated May 13, 1948, granting extension of time to September 15, 1948, for submitting additional information to the Board relative to the report of the Division Engineer, which was unfavorable to the desired improvement.

2. This report is based primarily on changed conditions since the date of previous presentations of the Port of Newport, and includes analyses of potential commerce available for water movement via Siletz Bay if improved in accordance with the desires of local interests. It does not purport to be a complete report on Siletz Bay, but is intended to present only changed conditions and additional information, to supplement the previous reports of local interests.

3. The report of the District Engineer, Corps of Engineers, Portland, Oregon, on the stated subject, has been made available to members of the Port body. Provision of an 18-foot channel as described under the caption, Plan 2, in the report, would meet the desires of the Port of Newport and other interested parties. Plan 2 provides for jetties at the entrance to the Bay, 700 feet apart at their extremity; a channel over the bar, 18 feet deep at the mean lower low water; and a channel 18 feet deep and 250 feet wide, from the Bay entrance to a turning basin, 550 feet wide and 700 feet long, opposite Cutler City. The first cost is estimated at $1,597,100, of which $30,100 would be borne by local interests. General reference is made to the District Engineer's report, with enclosures for information pertinent to but not repeated in this additional report of the Port of Newport.

4. The ratio of benefits to costs developed by the District Engineer is 0.69 to 1.00. It is believed the additional information contained in this study is sufficient to justify unquestionably the economic feasibility of the desired improvement.

5. Tributary area. - The area tributary to Siletz Bay extends from Cascade Head, on the north to a point about 5 miles south of Depoe Bay on the south, a straight-line distance of about 25 miles. The western boundary is the Pacific Ocean and the eastern boundary approximates the watersheds of Siletz and Salmon Rivers and of the crooks of the area. The area includes about 300 square miles of timber and agricultural lands. The extent of the area is based upon the possibility of transportation savings on commerce to and from the area, by use of an improved harbor in Siletz Bay.

6. Much of the area is covered by heavy growths of hemlock, fir, spruce, and cedar, which resource is considered to be the primary source of commerce available to the improved harbor. The volume of mature timber in the Siletz River Basin in Lincoln County is stated by the Department of Agriculture at about three billion board feet on 113,000 acres. Other timber stands in the tributary area, on Salmon River, Schooner Creek, and Drift Creek Basins, add a material footage.

7. The population of the area has increased materially since 1940. Figures just released by the Federal Bureau of the Census shows an increase of nearly 42 percent for Oregon. The increase on the Oregon Coast is believed to be well above this average. An estimate prepared by the Mountain States Power Company, based on number of installations, is a population of 9,196 for the area tributary to Siletz Bay, not including inhabitants of Lincoln Beach, Depoe Bay and the upper drainage area. These statements are supported by the letter of August 17, 1948, from the Power company, attached to and made a part of this study. It is believed that 10,000 inhabitants is a conservative estimate of the present population of the tributary area.

8. Annual yield, growing timber. - A discussion of annual yield on growing timber in Lincoln County, Oregon, considered applicable to the area in that county tributary to Siletz Bay, is found in Forest Survey Report No. 93, U.S.Department of Agriculture, entitled "Forest Statistics for Lincoln County, Oregon", attached to and made a part of this report. The report carries the following information on page 18 thereof:

Type Group	Area (acres)	Current annual growth board feet
Douglas Fir	330,000	184,000,000
Spruce	15,000	4,000,000
Hemlock	8,000	9,000,000

9. It is noted from the above figures that the average annual growth is nearly 600 board feet per acre for all fir lands, and over 1100 feet for hemlock lands. The report further states (page 18) that large second growth fir timber has an average annual growth of 773 board feet per acre; and that the net growth on stands over 160 years of age is offset by mortality and decay.

10. The yield volumne from growing timber is controlled by age and height of the growing trees. The forests in the Siletz Bay area are generally of the type that produce the highest yields. Based on rate of growth as stated in Forest Service Survey No. 93, with proper allowance for the necessary reseeding, it is conservatively estimated that the 50-year yield on the lands carrying large fir timber would be 29,000 board feet per acre; and on the lands carrying large hemlock, 42,000 board feet per acre. The volume of annual growth on large second-growth timber is given in the report as 773 board feet per acre, or 28,650 feet in 50 years. The timber lands in the area tributary to Siletz Bay run more heavily to hemlock than elsewhere in the Coast forests. Mixed stands, comprising perhapds 40 percent hemlock and 40 percent fir, would provide an estimated 50-year yield of about 35,000 board feet.

11. The yield on National Forest timber lands is being studied by the Forest Service in the Cascade Head Experimental Forest on Salmon River, which area is tributary to Siletz Bay. This is an area of approximately 10,000 acres, on which timber is now being cut at the rate of 7,000,000 board feet per year. The Forest S ervice intends to permit cutting at this rate for a few years until the yield can definitely be determined, at which time the rate of cutting will be adjusted, either up or down. The timber stand on the 10,000-acre area is 43 percent hemlock, 42 percent fir, and 15 percent other species, mainly spruce. Several 1-acre plots are being studied in the experimental forest, and a yield as high as 1464 board feet per acre has been measured on one of the plots.

12. Longview Fibre Company. - Mr. R. S. Wertheimer, Vice-President of this company, stated at the Taft hearing held May 6, 1947, that the company owns about 25,000 acres of land in RTillamook and Lincoln counties, located largely in the area tributary to Siletz Bay. The estimated stand of timber on these lands is 750,000,000 board feet, largely old growth and large second growth. He further stated that the company is now cutting from 20 to 40 million board feet of logs per year, for use in the company's plant at Longview, Washington.

13. In a recent interview Mr. Wertheimer stated that his company expected to log the company's holdings on a selective basis, utilizing thereafter the yield of the cut-over lands for their manufacturing purposes. The area tributary to Siletz Bay was stated to be 20,000 acres. The logs are shipped to the Longview plant, by truck to Willamina, thence by rail to Oswego, in Willamette River, thence by water the Longview. He stated at the hearing, and repeated at the recent interview, that he would ship the logs via Siletz Bay, if an improved channel were provided.

14. The estimate of the company of volume of logs from their holding over a long period is an annual average of at least 20,000,000 board feet. The yield for a 50-year period , based on data presented in paragraphs 8 to 10 of this report, would be as follows:

Type	Board Feet
Mature timber	750,000,000
50-year growth (20,000 acres)	700,000,000
Total	1,450,000,000
50-year annual average	29,000,000

15. It is noted from the preceeding paragraph that the yield on the timber lands of the Longview Fibre Company is ample to support the statement of the company that their cut will have an average volume of 20,000,000 board feet of logs per year. This entire volume is considered available for use of Siletz Bay channel, if improved as desired by local interests. Letter of the Longview Fibre Company of April 6, 1948, is attached hereto.

16. Oregon Pulp and Paper Company. - This company has recently acquired the timber holding in the Siletz Bay area formerly owned by the Werner Timber Company. Mr. Taylor Alexander, vice-president, with offices in Portland, Oregon, has informed the Port of Newport that, while his plans for operation of these holdings are as yet in an indefinite status, he wished to subscribe to the statements presented at the May 6, 1947, hearing at Taft, Oregon, in behalf of the Werner Timber company interests. In this connection reference is made to Mr. Alexander's letter of April 13, 1948, attached to and made a part of this study. Mr. Alexander further stated that while timber cutting by his company might not be at the rate proposed by the Werner Company, he believed that all of the usable timber would be removed over a long period, say 50 years, immature stands to be operated on a sustained yield basis.

17. Mr. R. W. Williams, an official of the Werner Timber Company, stated at the hearing that the named company owns 7339 acres of old-growth timber, with a present stand of about 400,000,000 board feet of fir, spruce, cedar and hemlock; and 4753 acres of cut-over lands which have been logged selectively and provide a perpetual source of growing material suitable for use in the pulp industry. In logging the 4753 acre tract, the hemlock was not cut. This stand of old-growth hemlock is conservatively estimated at 50,000,000 board feet. In recent conference with Mr. Williams these figures were confirmed.

18. The average annual output of the Werner Timber Company was about 40,000,000 board feet, varying from 20 to 70 million. About one-half of the output was directed to a plywood mill at Willamina, Oregon, the remainder being logs, lumber and shingles that could be advantageously transported by an improved Siletz Bay channel.

19. The timber comprises about 40 percent hemlock, 40 percent fir, and 20 percent spruce, cedar and other species. From the figures shown for annual yield in preceding paragraphs the estimated total 50-year yield on the holding of the Oregon Pulp and Paper Company would be as follows:

Type	Board feet
Mature timber	450,000,000
50-year growth (7339 acres)	250,000,000
50-year growth (4753 acres)	188,000,000
	888,000,000
50-year annual average	17,760,000

20. While the marketing plan of the Oregon Pulp and Paper Company cannot be learned at this time, the logical method of operation would be about in accordance with the former Werner plan, under which one-half the above yield or 8,900,000 board feet would be available for shipment by water through Siletz Bay if improved as desired by provision of an 18-foot channel. It is estimated that water shipments of this footage will be one-half logs and one-half lumber and shingles.

21. Hamilton Brothers Logging Company.- This company is now operating on the Cascade Head Experimental Forest, a part of the Siuslaw National Forest. The annual cutting now is 7,000,000 board feet of logs. These logs are delivered to a paper company at Oregon City, Oregon, by truck to Dayton, Oregon, on the Willamette River, thence by water to Oregon City. The market for the above volume is considered by the logging company to be perpetual. The company agreed that a movement through an improved Siletz Bay would be of interest, providing the cost of transportation would be less than by present methods.

22. Rose Lodge Lumber Company. - The mill of this company operated by D. J. Norton, is located on Salmon River on the highway between Siletz Bay and Willamina, approximately 20 miles from Siletz Bay, and the same distance from Willamina. The mill has a capacity of 50,000 board feet of lumber per day, or 12,000,000 feet per year, and has a market for and is producing the above volume of lumber. The company owns a small acreage on which there is an estimated volume of 15,000,000 board feet of large second-growth hemlock and fir, 80 percent of the stand being fir. While the company expects to increase its timber holdings in the future, the source of supply of logs to the mill at the present is by purchase, from operating logging concerns. Lumber from the mill is market in California and the east coast of the United States. Over a long period it is estimated that about one-half would go to California and half to the east coast.

23. Mr. Norton stated that he is interested in the improvement of Siletz Bay for navigation purposes and would move his products by water, through an improved Siletz Bay channel, providing transportation savings could be realized.

24. Midway Lumber Company. - This company operates a lumber mill on the highway near Grand Ronde, Oregon, on a railhead about 35 miles from Siletz Bay. The mill is producing about 24,000,000 board feet per year, with market in the midwest and California. E. J. Murphy, operator of the mill estimates that over a long period one-half the lumber would be sold in California, the remainder in the midwest. He stated that he would be interested in a water movement of lumber to California, through an improved Siletz Bay channel, providing transportation savings could be shown.

25. This company owns 3500 acres of old-growth and second-growth timber, supporting a stand of about 200,00,000 board feet. They also buy logs on the open market, cut partially on Federal lands. The logs used in their operations are all out outside of the area tributary to Siletz Bay, and brought by rail to the mill.

26. Friesen Lumber Supply Company. - The mill of this company is located on Drift Creek, near Siletz Bay. The cutting capacity of the mill is about 12,000,000 board feet of rough lumber used in the manufacture of box shooks. The rough lumber is now transported by truck to the shook company's box factory at Salem, Oregon, where box shooks are manufactured and shipped by rail to California and eastern markets. About 1500 acres of timber in the area tributary to Siletz Bay, with a stand estimated at 16,000,000 board feet, has been acquired by the company as a reserve for future operations.

27. The California market utilized about 6,000,000 board feet of this product annually. With the improvement of Siletz Bay as desired by local interests, the company owners state that a shook factory would be established on the Siletz Bay for accomodation of the California market. On account of the uncertainty as to the future of the shook industry, the potential waterborne commerce for Siletz Bay from this source is estimated at 3,000,000 board feet. In this connection reference is made to paragraph 61 of the District Engineer's report, dated August 8, 1947.

28. Siuslaw National Forest. - Data Furnished by the Supervisor of the Siuslaw National Forest, with offices at Corvallis, Oregon, show, in the Forest area tributary to Siletz Bay, a volume of old-growth timber on 4300 acres, amounting to 183,000,000 board feet; and on 33,400 acrest of immature timber, a volume of over 1 billion feet. The types of timber on these lands are hemlock, fir and spruce and other species. The estimated 50-year and annual yield, from information contained in preceding paragraphs, are shown:

Type	Board Feet
Old growth	183,000,000
50-year growth (4300 acres)	125,000,000
50-year growth (33,400 acres)	1,135,000,000
Total	1,443,000,000
50-year annual average	28,860,000

29. Deducting the 7,000,000 board feet now being cut annually on the northern portion of the Forest lands, accounted for elsewhere in this study, there remains an annual yield of 21,860,000 board feet from the remainder of the lands. With a rapidly increasing demand for timber products in the paper and building industries it appears that at least half of the above timber will be marketed within a 50-year period following improvement of Siletz Bay, and that a fourth of the total, or about 5,500,000 board feet would use the improved waterway, one-half logs and one-half lumber.

30. Other holdings. - The Oregon Mosabi Corporation owns about 4000 acres of standing timber in the Siletz Basin, the natural water outlet of which is Siletz Bay. A conservative estimate of the volume of marketable timber on this acreage is 340,000,000 board feet. Fir, spruce, cedar, and hemlock are represented in the stand, which is composed largely of mature timber. Similar but smaller stands owned by numerous holders carry a total

volume of about 100,000,000 board feet, on about 1200 acres. The average annual yield from the 5200 acres, over a 50-year period, would be as follows:

Type	Board feet
Old growth	440,000,000
50-year growth (5200 acres)	177,000,000
Total yield	617,000,000
Annual 50-year average	12,340,000

31. It is conservatively estimated that half of the above annual volume, or about 6,000,000 board feet, would move via an improved Siletz Bay waterway, one-half as logs and one-half as lumber.

32. Other commodities. - In addition to forest and petroleum products, other commodities, including sugar, salt, lime, canned goods, furniture and household furnishings, building materials, and heavy machinery would be shipped to the area tributary to Siletz River by barge, at the lower water rate. Annual consumption of such commodities, from study of other areas, is estimated at 1 ton per capita. A conservative estimate of the population of the area is 10,000 permanent inhabitants. On this basis the tonnage of these commodities now used in the area is estimated at 10,000 tons annually. On account of the opportunities for expansion and present increasing development of the area, it seems conservative to assume that the population at the end of a 50-year period will at least be double the present figure. The average over the 50 years would then be 15,000 permanent inhabitants for the area tributary to Siletz Bay, using an average of 15,000 tons of the above named commodities annually.

33. Merchants in the area favor the improvement, and are unanimously of the opinion that reduction in prices to the consumer would result from the desired navigation improvement by use of water transportation of commodities such as those mentioned in the preceding paragraph.

34. Summary of potential commerce. - A summary of commerce expected to move via an improved harbor in Siletz Bay is given in the following tabulation:

Source	Board feet		Tons
	Lumber	Logs	General Merchandise
Longview Fibre Company		20,000,000	
Oregon Pulp and Paper Company	4,450,000	4,450,000	
Hamilton Brothers Logging Company		7,000,000	
Rose Lodge Lumber Company	6,000,000		
Friesen Lumber Company	3,000,000		
Midway Lumber Company	12,000,000		
Siuslaw National Forest	2,250,000	2,250,000	
Other holdings	3,000,000	3,000,000	~~15,000~~
Other commodities			15,000
Totals	30,700,000	36,700,000	15,000

POTENTIAL BENEFITS

35. Transportation savings. - The Principal benefits that would result from an improved Siletz Bay channel would arise from savings in transportation costs by use of the improved waterway and connecting navigation channels, over present transportation methods, by truck and rail. These savings are of a general nature, and it is believed they would be transmitted to the general public by effecting a lower price to the consumer on timber products largely exported and general merchandise utilized in the area.

36. Contacts were made with the navigation companies interested in coastwise movement of forest products from an improved Siletz Bay. These companies were of material assistance in the determination of costs and policies of the proposed movement. It is the opinion of one towing company, interested principally at the present time in movement of log rafts, that the present tendency in coastal and intercoastal lumber movement is by shallower draft craft, and that an 18-foot channel in Siletz Bay would attract these craft, as well as the light-draft steam schooners engaged in the coastal business. A step indicating this tendency is the present movement of lumber from Coos Bay, Oregon, to San Francisco by the Irwin and Lyons Lumber Company, utilizing for the movement converted navy landing craft. The draft of these craft, with loa d of 6,000,000 board feet, is 10 feet. The other towing company is interested in barge navigation, and furnished a schedule of rates for the Coast and Columbia River Points, prepared in 1946. Towing costs have increased since that time, and use of the tariff in this study is conservatively based on 150 percent of 1946 costs.

37. Current costs of transportation by truck and rail of interest to this study are those between Siletz Bay and California markets, and between the bay and points on Columbia and lower Willamette Rivers. Costs of water transportation have been secured from Tariffs No. 25 and 48, Pacific Inland Tariff Bureau, Inc., and from the tariff described in the preceding paragraph. Rail rates are from Southern Pacific Tariff No. 790-N.I.C.C. No. 5014. Trucking rates are from Northwestern Tariff Bureau, Special Carrier Traiff No. 15.

Movement	Cost per 1000 board feet					
Siletz Bay to Willamina, Oregon	Logs	$4.03				
	Lmbr.	3.58				
Rose Lodge Lumber Company to Willamina, Oregon	Logs	3.30				
Rose Lodge Lumber Company to Siletz Bay	Logs	3.00				
Cascade Head to Siletz Bay	Logs	3.00				
Cascade Head to Dayton, Oregon	Logs	9.65				
Willamina to Oakland, California			Lmbr.	$12.90		
Willamina to Oswego, Oregon			Logs	5.36		
Willamina to Portland, Oregon			Lmbr.	3.30		
Siletz Bay to Oakland, California					Lmbr.	$9.96
Siletz Bay to Portland, Oregon and Vancouver, Washington					Logs	8.70
Siletz Bay to Longview, Washington					Logs	7.56
Siletz Bay to Oregon City, Oregon					Logs	9.33
Dayton to Oregon City, Oregon					Logs	0.58
Oswego to Longview, Washington					Logs	1.40
Oswego to Vancouver, Washington					Logs	1.08

38. Based on the above costs and considering differentials in loading, unloading and booming, savings are shown below on each item listed in the summary of paragraph 34 of this report.

39. Longview Fibre Company. - The movement of logs from the Siletz Bay area to Longview includes trucking to Willamina, thence rail to Oswego, and thence raft to Longview. The total cost of this movement is $11.94 per 1000 board feet, including the extra handling and booming charge. The cost of rafting logs from Siletz Bay to Longview is $7.56 per 1000 board feet. The saving creditable to an improved Siletz Bay would be $4.38 per 1000 board feet, or an annual saving on the 20,000,000 feet involved of $87,600.

40. Oregon Pulp and Paper Company. - The products of this company are expected to be logs transported to Vancouver, Washington, and lumber to California. The log movement includes trucking to Willamina, thence rail to Oswego, thence raft to Vancouver. The total cost of this movement is $11.94 per 1000 board feet, and the cost of water movement direct would be $8.70, with a resultant saving of $3.24 per 1000 feet. The cost of the movement of lumber to California, under the present practice of trucking to Willamina, and thence by rail to California, is $17.73 per 1000 board feet, including an extra handling, and by water direct is $9.96, with a resultant saving of $7.77 per 1000 board feet. The transportating savings on the products of the Oregon Pulp and Paper Company then would be $14,418 on 4,450,000 feet of logs, and $34,576 on the same amount of lumber, a total of $48,994.

41. Hamilton Brothers Logging Company. - Logs cut by this company in Siuslaw National Forest are moved by truck from Cascade Head to Dayton, Oregon, thence by the Willamette River channel to Oregon City, for use in a pulp mill. The present cost of the movement is $10.23 per 1000 board feet. As the cost of the water movement, based on the estimated water rate described in paragraph 36 above, would be in excess of the above figure no saving creditable to the desired improvement of Siletz Bay can be claimed for this movement.

42. Rose Lodge Lumber Company. - It is expected than an average volume of about 6,000,000 board feet of lumber per year will be shipped by the Rose Lodge Lumber Company to California points, over a 50-year period. The cost of present shipments, by truck and rail, is $17.45 per 1000 board feet, including an extra handling. The truck-water movement through Siletz Bay would cost $12.96 per 1000 feet. The transportation saving would be $4.49 per 1000 feet, or an annual saving $26,940 on the 6 million feet.

43. Midway Lumber Company. - The cost of movement of 12,000,000 board feet of lumber from this mill to California points by rail is $12.90 per 1000 feet. The truck-water cost through Siletz Bay would be slightly in excess of this figure, hence no saving creditable to the desired improvement of Siletz Bay would result.

44. Friesen Lumber and Supply Company. - Additional information was not secured regarding future operation of the Friesen Company, for this report. For that reason the saving on the annual volume of 3,000,000 board feet of box s hooks to California is estimated to be $18,000, the figure used in the report of the District Engineer, paragraphs 47 and 61.

45. Siuslaw National Forest and small holdings. - It is estimated that the potential commerce through Siletz Bay from the operations in the Siuslaw National Forest and on small holdings would amount to an annual volume of 11,500,000 board feet, one-half logs and one-half lumber. The logical method of marketing these products would be by shipment of logs to the Portland area, and of lumber to California points. The saving in shipment by water through an improved Siletz Bay, over present methods, would be $3.24 per 1000 board feet of logs, and $7.77 per 1000 board feet of lumber (see paragraph 40 above). The total annual saving on 11,500,000feet,one-half logs and one-half lumber, would be $63,300.

46. Other commodities. - The present population of the tributary area is conservatively estimated at 10,000 permanent inhabitants (see paragraph 7 of this report). The average population during the next 50-year period is expected to be 15,000. Use of commodities such as these listed in paragraph 32 above is estimated to be at the rate of 1 ton per capita, or a 50-year average of 15,000 tons annually.

47. The present cost of movement by truck from Portland is $5.60 per ton. The rate by water is estimated at $4.20 per ton, a difference of $1.40 per ton. For this report it is conservatively estimated that the average saving by water movement would be $1.00 per ton, or a total of $15,000 annually for the tonnage involved.

48. Benefits to the fishing industry. - The report of the District Engineer (paragraphs 51 and 52) estimates that benefits to the fishing industry in the Siletz Bay area, resulting from the desired improvement, would be $14,400 from the increased fishing time for a fleet of 20 permanent and 30 transient fishing boats. These figures are accepted for this report.

49. - In this connection it should be noted that a substantial quantity of fish products is trucked from Newport to Astoria by Newport plants. Establishment of plants at Siletz Bay would decrease the truck haul about 25 miles, with resultant material savings in transportation costs. As the concerns have not expressed a willingness to construct facilities at Siletz Bay no credit is assumed from this source for the desired improvement of the harbor.

50. Indirect benefits. - The value of improvement of Siletz Bay as desired by local interests, as a port of refuge, by stipulation of property values, and by benefits to recreational features, is estimated in the report of the District Engineer (paragraph 53) at $10,000 per year. These figures are accepted for this report.

51. Additional benefits, difficult to evaluate, but of extreme importance, would result from the elimination of many logging trucks from the highways. Logging trucks on mountain and valley highways are a source of much inconvenience and delay to the motoring public, and in addition present a material hazard to motorists and pedestrians using the highways. Two deaths resulting from accidents in the Siletz area in which logging trucks were involved were reported during the current month. Benefits from this source are estimated at $10,000 annually.

52. Summary of Benefits. - Expected annual benefits creditable the desired improvement and described in the preceding paragraphs are summarized in the tabulation below:

	1000 board feet		Tons	
	Logs	Lumber	Misc.	Savings
Transportation savings:				
Longview Fibre Company	20,000			$87,600
Oregon Pulp and Paper Co.	4,450	4,450		48,994
Rose Lodge Lumber Company		6,000		26,940
Friesen Lmbr. and Supply Co.		3,000		18,000
Siuslaw National Forest	2,750	2,750		30,300
Small holdings	3,000	3,000		33,000
Other commodities			15,000	15,000
Benefits to fishing industry				14,400
Indirect Benefits				20,000
	30,200	19,200	15,000	$294,234

53. Comparison of benefits and costs. - A study of costs of an improved Siletz Bay harbor has not been made for this report. Costs shown in the report of the District Engineer are used for comparison with benefits developed by this additional report. The comparison is shown below:

Annual benefits	$294,234
Annual costs	154,700
Ratio of benefits to costs	1.9 to 1.0

DISCUSSION

54. The timber lands of the Siletz Bay area are described by the U.S. Department of Agriculture as particularly well adapted to the production of forest crops. These lands are among the most productive lands of the Northwest. The physical conditions that influence tree growth are so combined as to produce favorable forest habits throughout the area.

55. The logical outlet for a large part of the timber products would be via an improved Siletz Bay channel, which would provide a saving in transportation costs for the water movement, over present methods. The estimated volume of timber products presented in this report that would use an improved channel is believed to be conservative and is based on factual data.

56. Costs of transportation used in this report are taken from published tariffs, except for the barge rate on lumber from Siletz Bay to California. The rate used is 150 percent of a tariff prepared in 1946 by a navigation company, for submission to the Interstate Commerce Commission in connection with an application for a certificate of convenience and necessity. It is believed that after the application has been granted, the actual water rate will be materially less than the figure used in this study. Lower rates are also to be expected with the use of the shallower draft lumber carriers, such as the converted navy landing craft now being used on the Coos Bay-SanFrancisco run, for Irwin and Lyons Lumber Company. In such event, savings on the California movement of lumber would be correspondingly increased, and savings could probably be shown for the Hamilton Brothers Logging Company and the Midway Lumber Company movements, described in preceding paragraphs and eliminated from the study by reason of the assumed water rate.

57. The estimated benefits resulting from savings in transportation costs amount to $294,234, and annual costs of the improvement are estimated at $154,700, providing a benefit-cost ratio of 1.9 to 1.0. A portion of the benefits from transportation savings on timber products amounting to $181,534 are based on figures compiled by officials of companies now operating in the area. These benefits alone provide a ratio of 1.17 to 1.00.

58. On the above basis it is respectfully requested that consideration be given to the additional information contained in this report on improvement of Siletz Bay Bar and Entrance, before decision as to the economic feasibility of the desired improvement is made.

Respectfully submitted

The Port of Newport

Signed by Morris Anderson
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