

AN ASSESSMENT OF THE IMPACT  
OF THE PROPOSED  
INTERNATIONAL WOOD PRODUCTS FACILITY  
OF REEDSPORT, OREGON

A Report Presented to  
the Port of Umpqua Commission  
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(This study does not represent the views of either Oregon State University, the Sea Grant College Program, or the Department of Economics, but is a representation of the findings and opinions of an interdisciplinary group of undergraduate and graduate students.)

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## INTRODUCTION, FINDINGS AND RECOMMENDATIONS

### INTRODUCTION

The International Wood Products Company has proposed to construct and operate a multi-product integrated plant for the manufacture and processing of hardwoods in Reedsport, Oregon. The company signed an agreement with Port of Umpqua, May 14, 1974, which stated that the Port would lease six acres of land adjacent to the harbor and would, through its authority, issue tax-exempt industrial revenue bonds to finance the construction of the proposed plant facility. In addition, the agreement, which expired December 10, 1974, provided that International Wood Products arrange for revenue bond financing.

In view of the potential economic, social, and environmental, impact of the proposed plant on the Reedsport area and the inability of International Wood Products to arrange revenue bond financing because of national economic conditions, the Port of Umpqua Commission decided that an independent assessment of these impacts could provide useful information. Consequently, students in a regional economics course at Oregon State University attempted to assess the impacts and implications of the proposed plant for Reedsport. The students presented their preliminary findings and recommendations to the Port on December 5, 1974.

### MAJOR FINDINGS AND RECOMMENDATIONS

1. International Wood Products now plans to finance, construct, expand, and operate its proposed facility rather differently than it envisioned in its original presentations to the Port of Umpqua Commission. Although in large measure the company's revised plans are the result of changes in financial and product market conditions outside its control, it is a fact that the

original agreement between the Port and the Company was drafted on the basis of information and predictions which are no longer entirely valid or accurate. Therefore, it is recommended that the Port of Umpqua ask International Wood Products Company to make a new presentation of its current, revised plans prior to deciding whether to enter into a new agreement with the company.

2. The Port of Umpqua has demonstrated considerable interest and initiative in attempting to develop Port property by attracting new industry to Reedsport, and thereby reduce the community's relatively high unemployment. Authorization of industrial revenue bonds, as means of financing new investments, constitutes a power that only municipal governments and certain public agencies have to subsidize industrial development. Therefore, it is recommended that the Port Commission use this relatively costless means to attract the kind of industry, be it International Wood Products or another, that will provide needed jobs, generate new income for the community, and meet the city's expectations of an environmentally clean and profitable firm.

3. Various employment and population impacts of the proposed International Wood Products plant facility have been estimated. The estimates are based on existing economic conditions in the Reedsport area and the assumption that the proposed plant would provide 105 new jobs when in full operation. These impact estimates are as follows:

- a. 180 additional jobs in Reedsport and its immediate vicinity.
- b. 45 to 75 jobs for currently unemployed Reedsport residents.
- c. 20 to 25 jobs for Reedsport residents not now in the labor force (e.g., housewives).
- d. 20 to 35 jobs for commuters residing in neighboring areas.
- e. 60 to 80 jobs for new workers attracted by additional employment

opportunities in the Reedsport area.

- f. 180 to 240 new residents of Reedsport.
- g. 2 - 3 percentage point reduction in the Reedsport unemployment rate.
- h. \$725 - 800,000 increase in total personal income within Reedsport.
- i. \$900,000 increase in total personal income within Douglas County.

4. Competition among alder users and reforestation of existing alder sites with conifers suggest that alder prices may remain high. Consequently, material costs to International Wood Products may well be higher than predicted, thereby reducing the firm's profitability. Also, the firm may be dependent on a less stable timber source than it anticipated.

5. The JOBS Entry Program of the Department of Labor is well suited to International Wood Products labor requirements and the poorly skilled, unemployed labor available in the Reedsport area. Without special permission from the Manpower Administration, however, the company cannot hire more than 25 percent of its employees under the JOBS Entry Program. For this and other reasons, the JOBS program would have only a minor impact in Reedsport.

6. The fiscal impacts of the proposed plant and the associated influx of population have also been estimated. Demands for local government services would increase less than Reedsport's property tax base. This is the case because the estimated increase in population, and hence demand, is relatively small given the existing capacity of Reedsport facilities to provide public services. As a consequence, although local public expenditures would increase, the combined property tax rate on real property within Reedsport would remain unchanged or decline slightly.

The evidence and arguments to support these findings and recommendations will be found in the text of this report.

## I. BACKGROUND

The International Wood Products Company has proposed the construction and operation of a multi-product lumber plant on 5 1/2 acres of land owned by the Port of Umpqua in Reedsport, Oregon. The company will purchase alder, presently an abundant hardwood in Oregon, to manufacture semi- and fully-dimensional furniture parts. In addition, the plant will dry kiln alder, maple, oak, cherry, pine, fir and hemlock for local sawmills. The plant's estimated capacity is 80,000 board feet of dry kiln lumber per day. The sawdust and wood chip byproducts of the plant's furniture production will be used to make fuel logs, barbecue briquettes, a nitrogen soil conditioner, and raw material for particleboard.

### FINANCING

Financing for the construction of the plant, the purchase of machinery and equipment, and other installation costs was originally to be secured by the issuance of \$2,500,000 worth of industrial revenue bonds by the Port of Umpqua. Private investors would contribute \$350,000 working capital to initiate the plant's operations.

### EMPLOYMENT

The plant, according to a November 21, 1974 letter from Mr. James Kelso to Dr. Charles Vars, will employ 30 persons the first year, 111 the second year, and 105 the third. The projected jobs will require both skilled and unskilled workers.

The company wants to enter into contract with the federal government and use monies from the JOBS Entry Program to provide on-the-job training and counseling for the local unemployed, disadvantaged and low skilled workers.

IWP plans to use the local school system for training and education classes for these workers.

#### TIMBER SUPPLY

International Wood Products' original prospectus projects a 150 year supply of alder, sufficient for present and long-term future production. The company also plans to develop its own alder supply under long-term lease agreements with private landowners.

#### MARKET

The furniture market has grown at an average rate of 5 to 7% yearly and International Wood Products predicts similar growth in furniture demand in coming years. Based on expected production, the plant will acquire approximately 5 to 8% of the local furniture part market during its first three years of operation. The company has also received letters of intent from purchasers of its dry kiln services, its briquette output and other products.

#### PROFITABILITY

By processing the wood and all byproducts, International Wood Products expects to earn a relatively high rate of return on stockholders equity. Table I presents estimates of International Wood Products' expected rates of return. These estimates are based on data taken from the company's original prospectus.



PROFITABILITY (\$1,000's)

$$\text{Return on equity} = \frac{\text{net profit (after taxes)}}{\text{average net worth}}$$

Year	1	2	3
Net Profit	-33	640	1,710
Average Net Worth	333.5	637	1812
Return on Equity	-9.80%	100.47%	94.37%
Three-Year Average Rate of Return		61.65%	

Source: International Wood Products Co., original prospectus (no date).

CHANGES IN COMPANY PLANS SINCE ORIGINAL PROPOSAL

The OSU study group arranged a conference telephone call with Mr. James Kelso, acting chief executive of International Wood Products. At that time, Mr. Kelso answered questions concerning matters in the prospectus and provided additional information regarding IWP's current plans for operations at Reedsport.

Industrial Revenue Bonds

Mr. Kelso described the firm's difficulty in finding an underwriter for the \$2,500,000 industrial revenue bonds. The general economic conditions in the country, he explained, did not favor such investments at the present time. He indicated that the IWP was actively seeking alternative sources of finance.

Employment Estimates

In the original prospectus, IWP projected 62 employees in its first year, 188 in its second, and 510 in its third. However payroll figures showed the workers receiving only an average \$1850 yearly in wages. Following the telephone conversation, Mr. Kelso sent the OSU study group a letter which

revised the employment figures to 30, 111, and 105 employees for the first three years of plant operation.

#### Production Emphasis

In addition, Mr. Kelso explained, International Wood Products had changed production emphasis from furniture parts to (1) the production of briquettes and fuel logs and (2) dry kiln services. Mr. Kelso did not estimate the changes in company assets and liabilities that this new production emphasis would cause.

#### JOBS Entry Program and Employment Composition

Mr. Kelso said he contacted Mr. Tom Hebner, superintendent of the Reedsport school district, about cooperation with the JOBS program. However, no commitment or agreement was reached regarding training activities.

Mr. Kelso also stated that approximately 50% of the company's work force would be women. Women, he explained, can adequately do the jobs offered. These jobs would provide substantial second incomes for some Reedsport households.

#### Environmental Impacts

According to Mr. Kelso, the dry kiln and processing operations would meet Oregon Department of Environmental Quality standards. The plant requires minimal amounts of water and would generate small amounts of waste effluent. Similarly, there would be little or no air pollutants produced by the plant.

#### Parking Facilities

The OSU group asked Mr. Kelso what provisions the company would make for parking facilities for its employees. Mr. Kelso said that IWP would run "minibuses" to and from the workers homes. He did not estimate the cost of this bus system.

November 21, 1974 Letter

Later, in a November 21, 1974 letter to Dr. R. Charles Vars, Mr. Kelso outlined additional new information about the plant. This is summarized below:

- 1) Annual wages per employee would average about \$5,000.
- 2) The number of employees per year was reduced to the numbers indicated above -- 30, 111, and 105.
- 3) The company would rely on private and grant funds.
- 4) The company is currently planning to manufacture and market briquettes at a profit of approximately \$0.24/bag at an initial production of 4000 bags per week.
- 5) The company is considering leasing the plywood plant adjacent to the Port of Umpqua site for its operations.
- 6) The company has contracted with North Pacific Lumber and Briquettor Systems for dry kiln services and production of fuel logs, respectively. These operations and the briquette production will make up the company's primary activities in its first year.

## II. FINDINGS RELATED TO THE COMPANY'S PROPOSALS

### TIMBER SUPPLY

Two factors affect the available supply of alder: (1) consumption and (2) replacement. At present some companies (e.g., Menasha Paper Co. and Jorgenson Mills) are chipping substantial quantities of alder. Part of this production is exported to Japan. An official for one alder cutting firm said that increased demand has created competition for the alder and, as a result, high prices. The Bohemia Lumber Company mill in Reedsport, for example, is not processing alder at this time. In addition, alder is not being replaced. The demand for softwood lumber favors its production over other wood types. Several sources indicated that as soon as alder stands are logged, the land is being reforested with conifers. Moreover, the Bureau of Land Management, the Forest Service, and the Oregon State Department of Forestry are all considering large scale "rehabilitation" of present alder and other hardwood sites into conifer sites.

Despite the present abundant supply of alder, competition among alder harvesting and processing firms and the reforestation of present alder sites with conifers may continue to force alder prices up. This suggests that (1) material costs to International Wood Products may be substantially higher than predicted, thus reducing IWP's profits below expected levels, and (2) in a larger sense, the firm may be dependent on an unstable timber source. Of course, the latter consideration depends on future government timber policies, alder demand, and competition among alder harvesting and processing firms.

### JOBS ENTRY PROGRAM

The hiring of the unemployed, underemployed, and low skilled involves major costs of training and counseling. The Department of Labor has developed

the JOBS Entry Program to reduce these costs and thereby induce the hiring of these persons.

The JOBS Entry Program is well-suited to the company and the area. It provides economic incentives in the form of tax breaks and subsidies to encourage a firm such as IWP to enter an economically depressed area.

The JOBS Entry Program is also advantageous to Reedsport. Over 10 percent of Reedsport's citizens qualify for JOBS-type positions. Not only will the JOBS Entry Program take individuals off the welfare rolls but, more importantly, it will give men and women skills to work for IWP and in similar occupations.

#### Individual Qualifications for the Program

To qualify for the JOBS Entry Program, an individual must be poor, not suitably employed and fall into one of the following categories: (1) a school dropout; (2) under 22 years of age; (3) 45 years and over; (4) handicapped or disabled; (5) a poor Vietnam veteran; or (6) subject to special obstacles to employment.

Those accepted for the program must receive at least minimum wage. According to the company prospectus, all IWP workers will receive wages well above minimum. In addition, JOBS employees must have the same working conditions, work the same hours and receive the same benefits as similarly employed workers.

#### Program Services

Program services are tailored to meet individual needs at the time of hiring. Services include: On-the-Job training/special counseling, orientation, job related education, English as a second language, medical and dental services, child care, transportation, and supervisory/human relationship training. All services are considered part of the employee's work week. The only mandatory service for the JOBS employees is OJT/special counseling. Special counseling

helps the workers with personal problems that affect job performance such as absences, budget planning and family resource management.

Job related education includes, for example, training in the proper cutting angles for saws making furniture parts. S/HRT trains individuals to supervise contract employees. Orientation helps the JOBS employee adjust to new working conditions through workshops discussing safety rules, work hours and overtime, payroll procedures, etc.

### Hiring

The company must submit a proposal to the Department of Labor, Manpower Administration, before any hiring is done. Once the proposal is accepted, hiring begins. The company, then, will place job orders with the Oregon Employment Service who will recruit possible JOBS employees. Persons in the Work Incentive Program (WIN), if available, will be given first opportunity for the jobs. The positions then will be offered to qualified disabled veterans and low-income Vietnam-era veterans and so on through a list of eligible persons. If no qualified individuals are found, then the contracts for those particular positions are terminated.

### Costs

Costs of the program to International Wood Products are difficult to determine. The OJT/Counseling cost is set at \$3/hour. Other set costs are job related expenses at \$2/hour for instructional cost; ESE at \$2/hour; S/HRT at \$6.25/hour for up to 4 hours per JOBS employee; orientation at \$2/hour. Transportation, child care and medical and dental services are variable according to the particular circumstances of the JOBS employee.

### Problems in IWP's Proposed JOBS Entry Program

The company has only contacted the Reedsport School superintendent once concerning the JOBS program. At that time, according to Mr. Hebner, the company was not clear on the administration of the JOBS Entry Program.

Consequently, no agreement was reached on the use of school facilities for the program.

In addition, the JOBS Entry Program requires that only 25% of the total work force be employed under the program. Thus, for the first year, only 8 of the 30 employees can be JOBS employees. According to Mr. Kelso, however, all of the labor force was to come from this program. To do this, the firm must get permission from the Manpower Administration. In the event that IWP cannot obtain such permission, only 26 of the final 105 jobs will be filled by JOBS workers.

Moreover, eligible applicants can come from areas other than Reedsport. Neither the Oregon Employment Service nor the company can discriminate on the basis of where an individual lives. Considering the current high unemployment rates in Coos Bay and other nearby Douglas County locations, there will be strong competition for these jobs. Consequently, only a fraction of the 26 jobs may actually go to the Reedsport unemployed and poor.

In summary, the JOBS Entry Program, even if started, may have only a minor impact in Reedsport.

#### ADDITIONAL UNCERTAINTIES

Our findings with respect to timber supply and the JOBS Entry Program indicate that there are elements of uncertainty associated with the proposed International Wood Products operation. In addition, attention should also be given to questions concerning the plant site, financing, contemplated operations, markets, and the hiring of women

#### Plant Site

The Company has stated that it would now prefer to set up its plant on the U.S. Plywood site adjacent to the Port site. How this change would affect the Port's efforts to improve and develop their property into an industrial

park is unknown. For example, is the Port in a position to make arrangements with U.S. Plywood for the property in question?

#### Financing and Operations

Given the impossibility of financing the construction of the plant at present by the issuance of industrial revenue bonds, will the Company be able to acquire the required capital investment of \$350,000 from investors and/or grants? Is \$350,000 sufficient capital to cover the revised production objectives? There are also questions with regard to the size of the plant, types of equipment, number of employees for each process, and the scale of operation required for the provision of dry kiln services and production of fuel logs and briquettes. Can these activities as now contemplated generate the kind of profits and competitive position that were originally outlined for the full scale operation?

#### Employment of Women

The Company intends to hire about 50% women. This is to be commended and the company applauded for being so equality-minded. However, trends in the particular area and industry indicate a strong bias against women in mills. This would probably be extended to cover women in furniture parts plants. The company might have some trouble fulfilling their stated objectives given this bias and the high unemployment rate for males in the wood products industry. One of the spin-offs of this project, were it to go through, would be the addition of other community jobs through the multiplier effect. Some of these jobs would certainly be open to and filled by women.

#### RECOMMENDATION

International Wood Products now plans to finance, construct, expand, and operate its proposed facility rather differently than it envisioned in its original presentations to the Port of Umpqua Commission. Although in



large measure the company's revised plans are the result of changes in financial and product market conditions outside its control, it is a fact that the original agreement between the Port and the Company was drafted on the basis of information and predictions which are no longer entirely valid or accurate. In addition, our study indicates that there are substantial elements of uncertainty surrounding the operations now contemplated by International Wood Products at Reedsport. Therefore, it is recommended that the Port of Umpqua ask International Wood Products Company to make a new presentation of its current, revised plans prior to deciding whether to enter into a new agreement with the company.

### III. IMPACTS

The introduction of new industry, such as the proposed International Wood Products plant, in Reedsport will produce economic, environmental, and social costs and benefits to the community. On the one hand, the IWP plant will reduce local unemployment, raise tax revenues, increase retail sales, and raise the community's income level. On the other hand, the IWP plant will mean additional costs for the local government and other service districts, affect property values, and perhaps, lower air and water quality. In addition, the IWP plant will raise or lower the property tax rate.

The Port Commissioners and Reedsport citizens must weigh the gains to the community from the IWP plant against the costs of the plant to decide whether the Port should lease land to IWP. Given existing economic conditions in Reedsport and the company's original proposed construction and employment schedule, this section attempts to measure the major impacts of the plant on employment and incomes in Reedsport and immediate outlying areas, on local population, on housing, on the major city services (e.g. police), on other service districts, and on property tax rates.

#### EMPLOYMENT AND PAYROLL IMPACTS ON REEDSPORT

##### Unemployment and Population in Reedsport

Table 2 gives the population of Douglas County, Reedsport and the Reedsport Census County Division (CCD) for the years 1960, 1970, and 1973. For our analyses, we estimated the present population of Reedsport at 4500.

Table 2

POPULATION IN REEDSPORT AND DOUGLAS COUNTY

Area	April 1960	April 1970	April 1973
Douglas County	68,458	71,743	76,900
Reedsport	2,998	4,039	4,400
Reedsport CCD	5,246	6,620	not available

Source: Population Research and Census Center, Portland State University

Table 3 gives employment figures for persons 16 years and older within the Reedsport CCD in 1970. At that time, 228 individuals or 9.1% of the labor force, were unemployed.'

Table 3

EMPLOYMENT STATUS FOR PERSONS 16 YEARS AND OVER, 1970: REEDSPORT CCD

Employment Status	Persons
Total 16 years and over	4280
Total Labor Force	2510
Labor Force Participation Rate	58.6%
Civilian Labor Force	2487
Employed	2259
Unemployed	228
Unemployment Rate	9.1%
Not in Labor Force	1770
Inmate of Institution	6
Enrolled in School	298
Other under 65 years	1003
Disabled or Handicapped	251
Other over 65 years	465

Source: U.S. Department of Labor, Manpower Administration, Lawrence Berkeley Laboratory

Based on Douglas County unemployment figures through 1973, estimates by Mr. Scott Hannigan, economist for the Oregon State Employment Service, and knowledge of recent local plant shutcowns, we estimated there are approximately 250 unemployed workers in the Reedsport CCD. The percent unemployed currently in Reedsport and surrounding areas is about 10% compared with a Douglas County average of 9% and an Oregon average of 7%.

Reedsport needs job opportunities. The "prime mover" of the Reedsport economy, as any other community economy, is its basic export industries, such as the proposed IWP plant would be. The plant would add needed jobs to the community.

#### Direct Plant Employment and Payroll

IWP plans to employ 105 individuals, at an average salary of \$5,000 when the plant is in full operation in its third year. The types of direct labor and their corresponding wage rates are shown in the company's original prospectus. Also, according to the prospectus, there will be an annual 10% increase in hourly rates.

Direct Employment from the Supply of Timber. International Wood Products will purchase hardwood timber from three sources to manufacture fully-dimensional and semi-dimensional furniture parts: (1) local sawmills; (2) state and federally owned timber lands; and (3) other private sources. IWP projects purchases of \$3,066,000 of "material" in its third year. Most of the material acquired would be hardwood lumber from the above three sources. This lumber purchase could lead to increased employment and income for Reedsport citizens. Already, Reedsport area firms have been contracted to cut alder. Because of time constraints and the difficulties of distilling this information from interviews with local millowners, this employment impact has not been estimated. It may be substantial, however.

Other Direct Employment Impacts. The construction of the IWP plant will probably lead to increased employment for Reedsport citizens (as well as some temporary negative impacts). Due to time constraints and the relatively minor impact of construction, payroll estimates were not made.

Secondary Employment and Payrolls

The strength of a community's economy depends in large measure on the magnitude, stability, and growth of its basic export-oriented industries. As export markets expand, basic industries and their employees increase purchases of locally produced goods and services, and thereby stimulate local economic activity. As basic employment and income in a community increases or decreases, so, too, does employment and income in industries which specialize in production for the local market. The total impact on a community's economy therefore will be greater than the employment and income changes in its basic export industries. As a consequence, these effects are often referred to as "basic employment or income multipliers".

Research has established that over extended periods of time the proportion of basic and non-basic employment in a community remains about the same. Thus, a rise (fall) in basic industry employment will lead to proportionate increases (decreases) in non-basic industry employment.

Using Reedsport Census District statistics on the employment by industry, we estimated the ratio of total employment to basic employment to be 1.7.\* Thus, for every basic job created, 0.7 additional non-basic industry jobs would be created. For Reedsport and its immediate vicinity, then, the IWP

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\* Interestingly, our estimated employment multiplier of 1.7 closely approximates the output multiplier of 1.87 for manufacturing in Douglas County estimated by R.C. Youmans, et al., "Douglas County, Oregon: Structure of a Timber County Economy", Circular of Information 645, Agricultural Experiment Station, Oregon State University (December 1973), Table 6, p. 20.

plant would create 105 new basic jobs and about 75 new non-basic jobs, or total new jobs for 180 workers.

#### Income Multiplier

An income multiplier relates the income created by non-basic industry to the income generated in the community's basic industries. In other words, the IWP worker pays a dollar of his income to his butcher who in turn pays his insurance man and so on. Based on research findings for other communities, we assume the Reedsport employment and income multipliers are equal. According to Mr. Kelso, the 105 IWP employees would receive approximately \$525,000 in wages and salaries. Thus Reedsport and adjacent areas would experience a total income increase of approximately \$900,000. This does not take into account additional income received from business profits, rents and other non-employment income by Reedsport residents.

#### Sources and Distribution of Labor

Not all 180 new jobs and \$900,000 income will go to Reedsport citizens, however. Because unemployment in Douglas County and adjacent areas is high, one cannot reasonably assume that all IWP employees will be drawn from the Reedsport unemployed, or alternatively, that the Reedsport unemployment rate could be reduced much below the state-wide average of 7 percent.\*

Unemployed Reedsport Citizens in Labor Force. Given a labor force of 2500 persons and an estimated 250 unemployed workers in Reedsport, a 2 - 3 percent reduction in the unemployment rate translates into 50 to 75 new jobs for currently unemployed Reedsport residents.

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\* A recent study of industrialization in rural counties provides support for the judgement. See D.A. Olson and J.A. Kuehn, "Migrant Response to Industrialization in Four Rural Areas, 1965 - 70", Agricultural Economic Report No. 270, Agricultural Experiment Station, University of Missouri (September 1974).

Unemployed Reedsport Citizens Not in the Labor Force. Part of the IWP and support industry employment would come from housewives and other individuals not currently in the labor force. Approximately 10 - 15% or 20 - 25 housewives and others not now in the labor force have been estimated to begin work for IWP and other firms.

New Workers and Commuters. Given the preceding estimates, approximately 80 to 120 new workers would be attracted by IWP and related employment opportunities in Reedsport. The International Paper Co. plant served as a model for estimating the proportion of new workers that would commute (i.e. live in Coos Bay or Florence and work in Reedsport) and the proportion that would live in Reedsport. Since 25 - 30% of International Paper Co. workers live outside the city of Reedsport, we have estimated that 20 to 35 workers would commute from neighboring areas while the remaining 60 to 80 workers would live in Reedsport.

#### Income Distribution

Employees who commute would have incomes of approximately \$100,000 to \$175,000. Assuming commuters' families shop mainly in their town of residence, little of this income will benefit Reedsport directly.

The income increase for the remaining IWP and service industry employees residing in Reedsport would range from \$725,000 to \$800,000.

#### Population

The 60 to 80 incoming workers and their families would increase Reedsport's population. The study group estimated a population multiplier of approximately 3 for Reedsport. Thus, for each new worker, there would be two additional persons living in Reedsport. Accordingly, the construction and full operation of the IWP plant would mean 180 - 240 new residents for Reedsport.

IMPACTS ON HOUSING

Current Housing Market Conditions

The Reedsport housing situation was best described by one Reedsport resident: "There's always been a shortage of housing in Reedsport." Table 4 gives the most recent data on the Reedsport housing situation. The table indicates that only a small percentage of units were unoccupied in 1970, and our survey discovered that this situation still exists today. In addition, the table reveals that Reedsport has a comparatively low percentage of apartments and duplexes.

Table 4  
1970 HOUSING DATA FOR REEDSPORT

	Number or Value(\$)	Percent
Housing Units	1,393	
Structure Type: 1 unit structure	1,059	6.0
2 plus unit structure	218	15.6
Mobile Home	116	8.3
Housing units lacking one or more plumbing facilities	25	1.8
Occupied Housing Units	1,298	93.2
Owner Occupied	928	71.5
Median Value	\$15,300	
Renter Occupied	370	28.5
Median Rent	\$81	
Crowded Occupied Units	87	6.7

The city zoning map identifies four major residential areas:

1. The area East of Reedsport High School and West of W. Railroad
2. The areas paralleling the Umpqua Highway to the South
3. The Southwest part of Reedsport along U.S. 101
4. The Northwest part of Reedsport along U.S. 101

While the area East of Reedsport High School (1,2) is currently well occupied,



new developments are planned in the Northwest and Southwest parts of the city.

One real estate firm plans to develop an 87-lot subdivision in NW Reedsport (Ranch Road Area) within the next five years. The homes will cost approximately \$30,000 to \$35,000. According to Mr. Peter Mulder of Umpqua Savings and Loan, buyers must have at least \$10,000 incomes to afford these homes. However, most local developers say there is presently a demand for this type of housing. This implies a certain degree in "move-up" by individuals now living in apartments and \$15,000 to \$20,000 homes.

A recent Reedsport water study by the Coos Bay consulting firm of Harlan, Gessford, and Erichsen suggests that the "trickle down theory" does not apply to Reedsport. They state: "Builders construct new homes. Other homes that have been vacated are either changed to apartments or are rented for higher rent. Prices continue to rise. (and) no private market exists for low income housing."

Three new apartment complexes are now or will be constructed in the Reedsport area during the next two years. A 30-unit complex is under construction in Gardiner, and there are 22 and 40-unit complexes being developed in southwest Reedsport. Many of these units will be occupied by the elderly who, according to the HGE report, will require at least 40 units for their needs during the next five years.

According to one developer, "we've been short on rental housing the last four years." Last year the average rent was above \$100 per month and when utilities are included apartment costs average about \$135 per month. These prices are too high for low-income residents, and as several developers stated, there is "a lot of garage living" in Reedsport.

#### Housing Impacts

The housing required for the new population generated by the IWP plant depends on whether the incoming worker is (1) single or married, (2) male

or female, and (3) highly or lowly paid. Though none of these factors can be predicted at present, the study group could make reasonable assumptions concerning the incoming population's preferences for housing types. Among skilled and professional employees, most females would seek apartment and rental housing and single family units equally. Most males would be heads of households and would prefer single-family units. They could afford homes in the \$30,000 to \$35,000 range. Most single males, expected to be a minority in this category, would seek apartments and rental housing and single family units equally. In contrast, among semi-skilled and unskilled workers, most females and males would seek apartments and rental housing. Some would prefer single family housing.

Though no precise projections can be made, we expect some incoming population would live East of Reedsport High School in apartments and houses, as individuals in this currently tight housing area move to Ranch Road homes; we also expect some would live in the Ranch Road area and in apartments in the Southwest. These would alter the Reedsport housing situation but not too dramatically. There would, however, clearly be a demand for low-income housing and apartments that did not previously exist.

Finally, the IWP plant-induced population growth may induce developers to construct lower-priced (say, \$25,000) single-family homes. One developer, for example, awhile ago planned the construction of a 48-unit town house complex with prices about \$25,000 per unit. Because of tight credit and money market conditions, however, the developer did not go through with his plans. An increase in housing demand could now possibly induce him to reconsider this development.

### IMPACTS ON SERVICE DISTRICTS

The proposed International Wood Products plant and the population generated by its operation will use existing community public services (sewer, water, police, etc.) and cause increases in costs to other service districts. In this section we discuss the possible impacts of the plant at full operation and the incoming population on public service operations and expenditures.

#### Fire Department Operations and Expenditures

Reedsport employs one full-time fire marshall who oversees a volunteer fire brigade with a budget of \$28,000 per annum. According to local officials and residents, this volunteer fire force more than adequately meets existing city needs.

The National Bureau of Fire Underwriters measures standards of fire protection based on the geographic area served and fire engine response time rather than by population ratios. The Bureau sets standards for the Response Distance, i.e., the maximum distance a fire engine and ladder crew should travel to fires within particular local areas. The Bureau's bulletin no. 315 identifies these response distances for (1) the "first due engine" and (2) the "first due ladder".

(1) For the first due engine in high property value districts where fire flow requirements are less than 4500 gallons per minute of water, response distance should be two miles. In high value districts requiring fire flows of 4500 to 9000 GPM, the response distance should be just one mile. For residential districts the response distance for the first due engine should be two miles. However, in sparsely settled areas where houses are at least 100 feet apart, the response distance should be no more than four miles.

(2) For the first due ladder in high value districts requiring 4500 GPM or less, the response distance standard is two miles. For high value districts requiring more than 4500 GPM, response distance is just one and one-half miles. In contrast, the residential district response distance is three miles, while in sparsely settled areas it is four miles.

Since the proposed International Wood Products plant and the new residents would live within the existing city limits and pose no extraordinary fire hazards, the present fire brigade would not be required to travel beyond present response distances. Therefore, we do not anticipate any increase in city expenditures for salaries or fire equipment. Furthermore, the population increase would have negligible impact on the timetable of any future capital investments in fire prevention or fighting equipment.

#### Police Department Operations and Expenditures

The police department currently operates on an annual budget of \$130,000. These expenditures cover the salaries for approximately ten staff, supplies, jail facilities, equipment and the maintenance of two police cars. According to the chief, the department will ask for five more patrolmen in next year's budget. He anticipates funding for at least one or two additional staff to handle the present overload.

Although population growth is a major cause of crime, a 1972 report issued by FBI Director Clarence Kelly, Report on Crime in the United States, cited many other determinants as well:

1. Density and size of the community population and the metropolitan area of which it is a part
2. Composition of the population with reference particularly to age, sex, and race
3. Economic status and mores of the population
4. Stability of population, including commuters, seasonal, and other transitive types
5. Climate, including seasonal weather conditions
6. Educational, recreational and religious characteristics
7. Effective strength of the police force
8. Policies of prosecuting officials

9. Standards of appointment to the local force
10. Attitudes and policies of the courts and correction
11. Relationships and attitudes of law enforcement
12. Administrative and investigative efficiency of enforcement, including degree of adherence to crime reporting standards
13. Organization and cooperation of adjoining and overlapping police jurisdictions.

In Reedsport, however, the police department has kept specific crime statistics for only the last four months. Thus, no analysis of trends in reported crimes, types of crimes and so on could be made. According to police officials, Reedsport crime problems occur in particular local areas. Comparatively little crime, for example, is reported in the residential areas, and few crimes fall into the "hard" crime categories of homicide, rape, robbery and assault. The increase in lesser crimes is apparently associated with the recent population growth in Reedsport and its vicinity. Present work overloads are mainly the result of lags in budget adjustments.

The population increase associated with the IWP plant will probably increase police operating expenses, may force the hiring of one or two policemen beyond future expected levels, and may lead to capital expenditures on one additional police car. However, due to (1) the various factors affecting crime and (2) the uncertainties concerning the incoming population, we could not estimate this expenditure impact with any precision.

#### Park and Recreation Operations and Expenditures

Reedsport currently operates and maintains two parks. Funded by the city and local school district, the parks have facilities for basketball and skating, and playgrounds for other recreational activities. The parks are maintained by two permanent employees and have annual equipment costs of about \$5,000. During the summer the city hires three to six additional workers, usually high school students.

The city has very tentative plans to develop two additional parks, but no action has been taken on these proposals and none is expected to be taken in the near future. According to Mr. Irving Johnson, city administrator, a 200-person population increase would require one additional park and two additional full time employees. This would increase city park and recreation expenditures by approximately \$20,000 per year. (This estimate excludes possible land acquisition costs on the grounds that land may be donated or set aside by either the city or county.)

#### Transportation Impacts

Land transportation in Reedsport depends primarily on two main highways--the Oregon Coast Highway (U.S. 101) and the Umpqua Highway (State Highway 38). The proposed IWP plant will increase the traffic on both these major roadways as well as local city streets. The study group identified two types of traffic generated by the IWP plant: (1) home-to-work traffic and (2) truck traffic.

#### Home-to-Work Traffic Impacts

Assuming 30 percent of the incoming workers commute, we estimated these workers would live in neighboring cities (Floreny, North Bend, and Coos Bay) in proportion to these cities' populations. Given the probable in-town population distribution discussed under "Housing Impacts" (i.e., an increased concentration in Southwest and Northwest Reedsport) and the Environmental Protection Agency's estimate that there is an average of 1.2 people per car in a typical home-to-work trip, we summarized the home-to-work traffic caused by the IWP plant in Table 5. (Although IWP's secondary impact on employment in Reedsport will increase the home-to-work traffic in Reedsport's non-basic industries, the volumes and pattern of this traffic have not been estimated.)

TABLE 5

HOME TO WORK TRIP DISTRIBUTION

YEAR	TOTAL EMPLOYEES	IN-TOWN EMPLOYEE	OUT-OF-TOWN EMPLOYEES THROUGH US 101 FROM SOUTH	OUT-OF-TOWN EMPLOYEES THROUGH US 101 FROM NORTH	TOTAL # EMPLOYEES THROUGH US 101 FROM SOUTH	TOTAL EMPLOYEES THROUGH US 101 FROM NORTH	HOME-TO-WORK TRIPS THROUGH US 101 FROM SOUTH	HOME-TO-WORK TRIPS THROUGH US 101 FROM NORTH
FIRST	30	25	4	1	29	1	48	2
SECOND	111	94	14	2	108	2	180	4
THIRD	105	94	10	1	102	1	170	2

\* (IN-TOWN EMPLOYEES) + (OUT-OF-TOWN EMPLOYEES THROUGH US 101 FROM SOUTH)

\*\* (TOTAL EMPLOYEES THROUGH US 101 FROM SOUTH) ÷ 1.2 x 2

\*\*\* (TOTAL EMPLOYEES THROUGH US 101 FROM NORTH) ÷ 1.2 x 2

### Truck Traffic Impacts

Assuming IWP operates at its maximum dry kiln capacity, 80,000 board feet of green lumber will be shipped in daily and an equivalent of 80,000 board-feet of 7% kiln dried lumber will be shipped out daily. Approximately 18,000 board-feet of green lumber, or 24,000 board-feet of kiln dried lumber, can be carried by one truck. Thus, the number of truck trips bringing in lumber daily would be  $(80,000 \div 18,000 = )$  8.89, and the number of truck trips shipping out kiln dried lumber would be  $(80,000 \div 24,000 = )$  6.67 daily.

The highway corridors on which the trucks travel depends on (1) where International Wood Products buys its lumber, (2) the location of the mills using IWP's dry kiln service, and (3) the location of IWP's customers. This information is not presently available. However, for our analysis, we assumed the truck traffic may be apportioned between highways 101 and 38 according to the present distribution of truck traffic on these highways. Table 6 summarizes truck trips generated by the plant. Table 7 summarizes the total traffic generated directly by the plant, by highway corridor, and Table 8 summarizes the present volume, present capacity, potential capacity and IWP's contribution of traffic to each major corridor.

We have not estimated the increase in truck traffic delivering bags for briquettes, ammonia for treating sawdust, fertilizer mulch, and so on. Moreover, we have not analyzed IWP's possible use of barges to transport logs. This, of course, would reduce the truck traffic.

### City Traffic Impacts

The 180+ total traffic trip increase from the SW and the NW part of Reedsport (see Table 7) will most likely pass from Highway 101 into Winchester Avenue and E. Railroad Avenue to the plant. The present volume of Winchester



**TABLE 6**  
**TRUCK TRIP DISTRIBUTION**

CORRIDORS	INCOMING TRUCK TRIP	OUTGOING TRUCK TRIP	TOTAL TRUCK TRIP
HIGHWAY 101 FROM S	4.54	3.41	7.95
HIGHWAY 58	4.35	3.26	7.61
TOTAL	8.89	6.67	15.56

TABLE 6

## TRUCK TRIP DISTRIBUTION

CORRIDORS	INCOMING TRUCK TRIP	OUTGOING TRUCK TRIP	TOTAL TRUCK TRIP
HIGHWAY 101 FROM S.	4.54	3.41	7.95 $\approx$ 8
HIGHWAY 38	4.35	3.26	7.61 $\approx$ 8
TOTAL	8.89	6.67	15.56 $\approx$ 16

**TABLE 7**  
**TRUCK TRIP GENERATED BY INTERNATIONAL WOOD PRODUCTS**

CORRIDORS	HOME-TO-WORK TRIP	TRUCK TRIP	TOTAL TRIP
HIGHWAY 101 FROM S	180	8	188
HIGHWAY 101 FROM N	4	0	4
HIGHWAY 38	0	8	8

TABLE 8

CORRIDOR VOLUMES

CORRIDORS	1973 VOLUME	PRESENT CAPACITY	POSSIBLE CAPACITY	PLANT CONTRIBUTION TO TRAFFIC
U E CITY LIMIT - HWY 38	6800	5800	8120	4
S				
1 HWY 38 - 16TH ST	10400	18500	24000	-
O				
1 16TH ST - W. CITY LIMIT	12300	20700	26910	188
H UMPQUA AVE	6100	6300	8500	8
W				
Y FIR AVE	5700	7800	10420	8
3 UMPQUA HIGHWAY	3300	7350	10290	6
8				

with an incoming population of 200 persons, we predict the existing water system can easily handle the increased water demands associated with full operation of the proposed IWP plant.

Since the incoming residents will live within Reedsport's city limits, and since the total cost of extending water lines is borne by developers, no additional capital expenditures will be necessary to satisfy the increased demands for water. Moreover, according to Mr. Johnson, IWP plant construction and the accompanying population increase would increase total operating costs minimally. In fact, average operating costs may decrease as the system runs closer to capacity. These potential cost reductions have not been estimated, however.

#### Sewer System Impacts

The Reedsport sewage system was constructed three years ago and has a capacity to handle loads generated by approximately 7000 people. International Wood Products has no figures on its probable sewage outputs, but, according to Mr. Kelso, the plant will produce domestic-type sewage only. Therefore, again we postulate the IWP plant to be equivalent to 50 - 100 people. Given this assumption, the Reedsport sewage plant could more than adequately handle the increased sewage outputs of the plant and the associated population increase.

No sewage plant capital expenditures are predicted. The port and the city have already agreed to a sewer line extension from the plant site to the sewage plant. This is a one time expenditure which would probably occur even if the IWP plant were not to locate at the Port site. In addition, any sewer line extensions for new housing would be fully borne by the developers. Since sewer systems typically have decreasing average operating costs as they run closer to capacity, again there should be efficiency gains as demands on the

system increase. We did not, however, attempt to estimate these gains.

#### Impacts on Reedsport School District 105

The school impact can be directly related to the number of incoming school-age children. We projected that the average number of students per family in the incoming population would be similar to that for families now in Reedsport, which is approximately 0.9. Therefore, if 80 new families move into Reedsport, the school population would increase by about 72 students.

The current student population for all Reedsport schools is 1443 students. According to Mr. Hebner, School Superintendent, Reedsport schools could accommodate an additional 150 to 175 students if these students were evenly distributed over the grade levels. However, Hebner noted, the 8th grade is currently overloaded and any substantial increase in students in this grade would force (1) the shifting of the grade to the high school or (2) some other administrative action. We have made no estimates of the age composition of the incoming school-age population.

The school system could apparently absorb the 70 incoming children with only a small increase in current operating expenses, but the marginal gain school population would probably mean earlier construction of new schools in the future. The cost of earlier construction, of course, would be an earlier rise in tax levies than would otherwise be the case. In addition, the allocation of school funds among various programs would probably be different than otherwise.

#### Impacts on Lower Umpqua Hospital District

The Lower Umpqua Hospital District consists of an area bounded on the north by Lane County, on the East by Weatherly Creek, on the south by Coos County and on the west by the Pacific Ocean. Property taxes and operating revenues

finance the operation of a 22-bed hospital and a 20-bed nursing home located in Reedsport. The hospital is a primary care facility with a laboratory, x-ray, and obstetrics and surgery facilities. The hospital and the nursing home operated on a budget of \$670,215 in fiscal year 1974. Together, the hospital and nursing home employ about 60 persons, including two emergency ambulance teams.

According to Mr. Ken Thompson, hospital administrator, 30% of available beds are currently occupied. This occupancy rate has been steady in recent years except for summer months, when the rate increases slightly. Mr. Thompson cited two factors that affect hospital occupancy and expenditures: (1) the ratio of physicians to residents in the community and (2) the type of patient care provided.

Presently there are just three doctors in Reedsport. Each uses the hospital differently, and so too would probably a new doctor. As a consequence, if the population increase associated with the IWP plant induced a new doctor to live in Reedsport, Mr. Thompson predicted the occupancy rate would rise. If not, Thompson said, a population increase of 200 persons would probably have negligible impact on hospital and nursing home expenditures. If, however, the hospital occupancy increased to 80 percent, Thompson estimates that expenditures would rise by about \$60,000.

For several reasons the study group did not project an expenditure impact on the Lower Umpqua Hospital District. First, doctors may or may not be induced to move to Reedsport because of the population increase. Second, the gains in hospital efficiency from operating nearer to capacity cannot be estimated accurately at present.

#### Impacts on SWOCC, Port of Umpqua, and Douglas County IED

The population increase associated with the International Wood Products plant would have negligible impact on the operation of Southwest Oregon

Community College, the Port of Umpqua, and the Douglas County I.E.D. Neither the expenditures nor tax rates of these public bodies would be affected much by a 250 - 300 person increase in the population served.

Summary of Impacts on Public Services

Table 9 summarizes impacts of the International Wood Products plant and its associated population increase on public service expenditures in Reedsport and adjacent areas.

Table 9  
SUMMARY OF IMPACTS ON PUBLIC EXPENDITURES

DISTRICT and SERVICE	CAPITAL EXPENDITURES	OPERATING EXPENDITURES	
		Total	Average
City of Reedsport	increase	increase	uncertain
Fire	negligible	negligible	negligible
Police	increase	increase	undetermined
Parks and Recreation	increase	+\$20,000	increase
Sewer	negligible	increase	decrease
Water	negligible	increase	decrease
Streets	increase	increase	uncertain
School District 105	increase	increase	uncertain
Lower Umpqua Hospital District	uncertain	uncertain	uncertain
Douglas County I.E.D.	negligible	negligible	negligible
Port of Umpqua	negligible	negligible	negligible
Southwest Oregon Community College	negligible	negligible	negligible

Overall, we conclude that the IWP plant and the accompanying population increase will have a relatively small impact on City of Reedsport and other public body expenditures.

PROPERTY TAX RATES

Table 10 presents the assessed valuation, tax levy, and amount of property tax revenue to be raised by six districts serving Reedsport. In 1974-75 Reedsport property owners will pay \$22.39 per \$1000 of taxable assessed value.



Table 10

Taxing District	District Assessed Valuation	Tax Rate (\$/\$1,000 assessed value)	Property Tax Revenue to Be Raised
City of Reedsport	\$ 31,249,745	6.19	193,435.92
Douglas County I.E.D.	1,371,720,294	4.72	6,474,519.79
School District 105	135,838,043	8.33	1,131,530.90
Southwest Oregon Community College	135,838,043	1.20	163,005.65
Port of Umpqua	186,805,321	.23	42,965.22
Umpqua Hospital District	165,700,692	1.72	285,005.19

The property tax rate for any district is calculated using the following formula:

$$\text{property tax rate} = \frac{\text{budgeted expenditures minus non-property tax revenues}}{\text{taxable assessed value of property in district}}$$

The IWP plant and incoming population would affect all items in this equation. As a consequence, we predict property tax rates would change. However, due to uncertainties concerning service expenditures, we did not estimate specific property tax rate changes by public service district. Nevertheless, several factors do suggest that, other things being equal, the City of Reedsport property tax rate would be reduced slightly.

The assessed valuation for the IWP plant property would be \$2.9 million. The assessed value of housing for the incoming population would be \$1.4 million, or approximately \$20,000 per family. The absolute increase in district tax bases due to the plant would therefore be approximately \$4.3 million. If the

total assessed valuation of Reedsport property remained at its 1974 - 75 level of \$31,249,745, there would be a thirteen (13) percent increase in the city's tax base.

As indicated earlier, the plant and incoming population would have a relatively small impact on city expenditures (perhaps an increase of less than \$40,000). Moreover, the city would receive additional non-property tax revenues from the plant and the incoming population (e.g., fees of various sorts). Therefore, Reedsport would have the numerator of the above formula (expenditures - non-property tax revenues) remain the same or increase only slightly.

Comparing the changes in the tax base and the expenditure-nonproperty-tax-revenue differential, we conclude that Reedsport's tax levy would be reduced slightly. This would probably be observed, however, as a slower than otherwise increase in the tax rate, not an actual observable reduction in the tax rate.

Conducting similar analyses for the other five public service districts, we conclude that their tax rates would remain about the same if the IWP plant was constructed and the Reedsport area population increased.

