EMPLOYMENT OPPORTUNITIES FOR FOREST TECHNICIANS

By

Richard Keith Spring

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INTRODUCTION

Enrollment of students in the two-year forest technology curriculum has steadily increased since the program's establishment (Fletcher and Mosher, 1968). Greater numbers of forest technician graduates will have an impact on the forestry profession by decreasing the employment of professional foresters and by increasing the technician to professional forester ratio (Fletcher, George, and McDermott, 1966).

Objective

The objective of this study is to determine the past, present, and future demand for forest technician graduates in the forestry profession. Literature reviews, questionnaires, and personal interviews with forest technician instructors were utilized to accomplish the objective.

Audience

This presentation has been written for those persons who are interested in obtaining knowledge about the employment opportunities for forest technician graduates. The study will familiarize high school students and veterans returning to college with the career possibilities in forest technology and provide a basis for consideration of this educational route.

Occupational Opportunities for a Forest Technician

The types of positions which are open to qualified forest technician graduates include: (United States Department of Health, Education, and Welfare, 1968)

Timber Management Technician duties

1. Estimating timber stand data - timber cruising and log scaling
2. Timber sale layout - marking timber, posting boundaries of timber sale areas
3. Setting up and supervising pre-commercial thinning work
4. Reforestation - planting area layout, planting inspection and follow-up on survival, germination studies, animal damage surveys
5. Timber sale administration - inspecting contract operators
6. Forest insects and disease observations and control
7. Nursery culture work in forest nurseries

Forest Engineering Technician responsibilities

1. Forest surveying - boundary problems, deed research, campground layout, elevations and drainage systems mapping
2. Logging engineering - assisting on small woodlots logging, trainee for large logging sales company as engineer
3. Road location and design - reconnaissance, layout, inspecting contract operators
4. Special engineering projects - development of trail systems necessary to recreation, catch basins design for fire control, bridges

Fire Control Technician jobs

1. Fire prevention technician
2. Fire control technician
3. Supervisory fire control technician
4. Carrying out slash disposal plans

Forest Products Technician positions

1. Plant operations - laboratory technician
2. Research and development - research technician
3. Quality control - wood products
4. Sales and service
5. Log and timber buying

Other Resource Technicians

1. Forest Recreation Technician - planning for and inspection of recreation facilities in the developing stage, controlling people use in recreation areas through personal contact and maintenance, general administration of private and public campgrounds and parks, public relations work
2. Research Technician - works directly with scientists and professionals in developing new methods and operations, and in doing basic research
3. Range Technician - assistant to professional range management personnel

Employment opportunities exist with federal agencies such as the United States Forest Service, Bureau of Land Management, and Bureau of Indian Affairs; with state and county forest agencies; cities, private lumber companies, pulp and plywood companies, forestry consulting firms, private surveyors, and small wood products and logging companies. Jobs may also be

found in research laboratories, wood plastics firms, pulp and paper mills, and in road building.

METHODS

The past, present, and future demand for forest technicians was examined by means of a literature review, a questionnaire which was sent to Oregon community colleges, a questionnaire which was mailed to private industries which are employers of forest technicians, and an interview with employment personnel from the U.S. Forest Service Region 6. Emphasis is placed primarily on forest technician graduates from Oregon community colleges.

A literature review was employed to determine the past and present manpower needs for forest resource workers in the career levels of (1) assistants or laborers, (2) technicians, (3) professionals, and (4) scientists. Reference material was also surveyed to ascertain whether an impact is occurring on the forestry profession by graduates from forest technician training programs.

The Forest Service is one of the major employers of forest technician graduates in the Pacific Northwest. An interview was conducted with Forest Service employment personnel from Region 6. Information was established on the following aspects:

1. The past employment of forest technicians by grade and a forecast of the expected distribu-

tion of graduate technicians by grade in 1974.

2. The projected employment of 1971 and 1972 technician graduates in Region 6 of the Forest Service.

3. The future demand for forest technicians in other government agencies and other regions of the Forest Service.

4. The private industries in Oregon which have employed technician graduates in the past.

Following the interview with Forest Service employment personnel, a questionnaire was sent to private firms which might be possible employers of graduate technicians. Questions which were asked of the private organizations include:

1. How many forest technician graduates has your firm employed by year from 1969 to the present?

2. Does your company expect to hire any forest technician graduates for a permanent position this spring, and if so, how many?

3. What is the projected demand by year for permanent employment of forest technicians with your organization in 1972 and 1973?

A two-part questionnaire for completion by forest technician instructors in Oregon was also drafted to investigate the employment opportunities for forest technicians. The two types of questionnaires included: (1) a table-type form to survey Oregon forest technician enrollment and job statistics and (2) a list of specific questions to learn detailed information about the demand of forest technicians for permanent jobs, summer jobs between school years, and part-time jobs during the school year. Both questionnaires were mailed to the following

community colleges in Oregon:

1. Central Oregon Community College - Bend, Oregon
2. Chemeketa Community College - Salem, Oregon
3. Clatsop Community College - Astoria, Oregon
4. Mt. Hood Community College - Gresham, Oregon
5. Southwestern Oregon Community College - Coos Bay, Oregon
6. Lane Community College - Eugene, Oregon
7. Umpqua Community College - Roseburg, Oregon

During Spring Term 1970 the following specific questions were asked concerning employment possibilities:

1. Does either industry or government hold interviews or recruit at your community college for forest technician graduates or for forest technician students to fill summer positions?

2. What are the job possibilities for forest technician graduates at your community college and where have the graduates been going?

3. What are the possibilities for students after they have completed the first year of study to get on-the-job summer experience in forestry with industry or with government agencies?

4. Are any programs in effect to help those forestry students who need part-time work while going to college?

Answers to these questions are presented in the Questionnaire Study Report (Appendix E).

RESULTS

Outlook of Manpower Supply and Demand

Within the past ten years, according to information reported by the SAF (Society of American Foresters) Committee on Training of Forest Technicians, 50 schools have opened new programs for the training of technicians for the several forest

resource fields. During the preceding 60 year period, some 37 non-professional forestry programs began operation; seven of these schools are now in existence, five have two-year technician programs and two are at the one-year vocational aids level.

Of the 38 schools with forest technician training programs which reported to the SAF Committee on Training of Forest Technicians in 1968, 30 of the programs were in forest management and timber harvesting and 19 were in related fields, including 10 in wood products utilization and merchandizing, 6 in natural resources conservation, and 3 in park and recreation management or fish and wildlife management. These programs are being offered in 18 states by the 38 institutions, including eight universities, and 30 community colleges, junior colleges, or technical institutes. In 1968 these institutions were also considering the inclusion of the following curricula or options: 13 in forest management or timber harvesting, 6 in park and recreation management, and 5 in fish and wildlife management (Fletcher and Mosher, 1968).

In the March 1971 meeting of the SAF Committee on the Training of Forest Technicians the following updated information on forest technician training programs in the United States was obtained:

1. In 1967 there were 20 programs that were one year or less in length, while in 1970 only three programs were less than two years in length.

2. 1968 saw the establishment of 16 two-year Forest Technician programs; the Department of Health, Education, and Welfare Forest Technology Curriculum Guide was also published in 1968. In 1969, however, only three new programs were started.

3. The 1967 report of the Committee suggested an annual need for 620 technicians, with approximately 420 persons to come from forest technician schools. There are to be about 911 graduates this spring, 1971; thus there are at present over twice as many forest technician graduates as jobs available.

4. Of the 48 Forest Technician programs reporting in 1970, all but 10 claimed to meet or exceed the minimum guidelines for Forest Technology programs proposed by the SAF on October 16, 1969.

In Table 1, when the estimated 20-year increases in manpower demand to 1980 are expressed on an average annual basis, and compared with the number of degrees granted by our forestry schools some interesting and significant implications are revealed (Fletcher and Mosher, 1968; Marckworth, 1970).

Table 1. Comparison Between Estimated United States Demand for and Supply of Forest Resource Workers According to Level of Education

Level of Education	Average Annual Manpower Demand 1961-1980[1]	Manpower Supply From Forestry Schools - 1969	Ratio of Supply to Demand
Doctor	125	146	1.17
Master	300	520	1.73
Bachelor	500	2,427	4.85
Assoc. and Certif.[5]	420	911[2]	2.17
Student	200	701[3]	3.51
Aide	835	1,000[4]	1.20
Total	2,380	5,705	2.40

[1]Does not include Wood Science and Technology.

[2]Based on 48 programs reporting in 1971, expected number of June graduates.

[3]20 percent of 1969 Junior class enrollment in the forestry schools.

[4]Judgment estimate only for new trainees from both formal and planned informal (on-the-job) programs.

[5]Forest Technicians.

Number of Forest Technician Graduates Being Educated

Since the establishment of two-year Forest Technology programs an increase in student enrollment has occurred. The current demand for students educated in forestry has decreased and forest technology instructors are considering placement of a limit on the number of new students being allowed to enter the forest technician program. The following information represents the results of research which I have conducted to determine the output of forest technician graduates in the Pacific Northwest since 1968:

Table 2. Forest Technician Production

States	1968 Grads.	1969 Grads.	1970 Grads.	1971 Grads.
Oregon	30	49	85	120
Washington		25	64	87
California[1]			26	28
Montana			20	18
Idaho			15	15
Alaska			1	
			211	268
S.W. Canada		111	137	126

[1]College of the Redwoods and Sierra College were the only California schools which reported.

Table 3. Enrollment Statistics 1970-71

States	Fall 1970 Freshmen	Fall 1970 Sophomores	Total 1970-71 Enrollment
Oregon[1]	423	155	578
Washington	232	110	342
California[2]	130	37	167
Montana	48	21	69
Idaho	20	16	36
Alaska	5	1	6
	858	340	1,198
S.W. Canada	226	153	379

[1]As of March 13, 1971 Oregon community colleges had a total enrollment of 475 students in the Forest Technology program.

[2]College of the Redwoods and Sierra College were the only California schools which reported.

The Past, Present, and Future Demand For Forest Technicians

The U.S. Forest Service is the largest employer of forest technician graduates in the Northwest United States and an active interest in the production and employment of technician graduates has been taken by the Forest Service. This agency aids in the instruction of field labs for technicians during the school year and allows the community colleges to conduct field experiments during labs in the National Forests. The Forest Service Region 6 has kept abreast of information on forest technician graduates and has supplied me with the data in Table 4: Past, Present, And Future Employment Opportunities For Forest Technicians.

Table 4. Past, Present, and Future Employment Opportunities For Forest Technicians

Forecast of Permanent Employment by Employers[1]

Employers	June 1969	June 1970	June 1971	June 1972[2]
Private Industry	15	15	6	15
Oregon State Department of Forestry	10	6	6	10
Washington State Dept. of Natural Res.	10	22	7	12
Idaho Department of Lands	-	0	0	2
Bureau of Land Management (Oregon)	7	4	0	15
Bureau of Indian Affairs	2	4	6	6
U.S.F.S. R-6 (Oregon & Wash.)	11	30	27	53
U.S.F.S. R-1 (Idaho & Mont.)	8	10	4	10
U.S.F.S. R-5 (California)	20	10	35	50
U.S.F.S. R-10 (Alaska)	2	0	2	3
	85	101	93	176

[1]Estimates were released in February of the given years.

[2]Fiscal year measurement (July 1, 1971 to July 1, 1972).

Summer Employment

Employers	1969	1970	1971
Private Industry	28	38	7
Oregon State Department of Forestry	3	4	6
Washington State Dept. of Natural Res	12	14	0
Idaho Department of Lands	-	0	9
Bureau of Land Management (Oregon)	3	-	10
Bureau of Indian Affairs	0	0	4
U.S.F.S. R-6 (Oregon & Wash.)	157	220	197
U.S.F.S. R-1 (Idaho & Mont.)	60	-	20
U.S.F.S. R-5 (California)	20	24	200
U.S.F.S. R-10 (Alaska)	4	10	12
	287	310	465

In Table 5 a breakdown of actual employment by agency for Oregon forest technician graduates from 1968 to the present is given. This information was provided by Oregon forest technician instructors through the Oregon Forest Technician - Enrollment And Job Statistics questionnaire survey. Forecasted employment statistics from Table 4 and actual hiring of Oregon forest technician graduates is relatively close for agencies in Oregon.

Table 5. Past Employment by Agency for Oregon Forest Technician Graduates

Actual Permanent Employment

Employers	1968	1969	1970	1971[1]
Private Forestry and Wood Products	8	14	15	14
Oregon State Dept. of Forestry	1	2	6	7
Bureau of Land Management (Oregon)	0	7	10	6
U.S.F.S. R-6 (Oregon & Wash.)	7	9	27	35
Wash.State Dept. of Natural Res.	0	0	4	0
	16	32	62	62

[1]Figures as of the middle of April 1971.

The data in Table 6 indicate the past grade and future forecase grade levels in timber management for forest technicians with the Forest Service Region 6. The present grade level of employment for forest technicians is the GS-4 level, but the Forest Service is making a significant effort to have the starting grade level raised to a GS-5 so they will be able to compete for the best graduates. The table is rather indicative of the Forest Service's present plan to increase the ratio of forest technicians to professional foresters. The figures for Forest Service employment of forest technicians differs in comparison to the Forest Service's present policy of hiring only in the range of 15 to 25 professional foresters per year for the entire Region 6 (Oregon and Washington) of the U.S. Forest Service.

Table 6. United States Forest Service
Timber Management Jobs - Region 6

Employment of Technicians (By Grade)

G.S. Rating	2/1966	11/1967	11/1968	Forecast 1972	Salary Per Year
2-4	83	99	54	202	$ 6,202(GS-4)
5	226	196	196	305	6,938
7	196	283	353	365	8,582*
9	27	50	69	185	10,470**
11	5	5	6	25	12,615
Total	537	633	678	1,082	

* in grade raises to $11,156.

** in grade raises to $13,611.

The GS-7 rating is considered the operating grade forest

technicians. The GS-9 level would be involved in items such as sales compliance. The GS-11 level would be the principal District Assistant in those districts where the District Ranger is a GS-12; presently about half the District Rangers are at the GS-12 level. The Forest Service anticipates about a five percent turnover each year and expects to employ about 50 technicians per year. There will be an additional need in engineering crews and some positions in recreation. The added need for recreation will probably run about five employees per year.

Breakdown of Jobs For Forest Technicians in Private Industry

To supply information about the breakdown of jobs for technicians in private industry a questionnaire survey of private companies which might be employers of graduate forest technicians was conducted. Private industry is the major employer of professional forestry graduates, but a significant number of forest technician graduates from the Pacific Northwest are also hired by private firms. Results of the survey indicate that Weyerhaeuser Company is leading the way in the employment of forest technicians and possibly other private companies will follow if private industry in the United States follows the trend set by Canadian private industry which employs approximately two-thirds of Canada's graduate forest technicians. Results from the survey of private industries are illustrated in Appendix A.

Distribution of Forest Technician Graduates

Two of the major questions a student might ask if considering a forest technician career are: (1) What firms employ forest technicians at the community college I plan to attend, and (2) What type of work will I be doing? To answer the first question I drafted a chart-type questionnaire and sent it to forest technician instructors of community colleges in Oregon. Upon conducting my survey of Oregon community colleges I received from the North Pacific Technician Training Forum the results of a similar study which was conducted in 1969 for the entire Pacific Nortwest. The results of both these surveys are included in the Appendix. The presentation directed by the North Pacific Technician Training Forum provides information on the types of work done by forest technicians.

Oregon Forest Technician - Enrollment And Job Statistics. My survey on the employment opportunities for forest technician graduates was conducted specifically for community colleges in Oregon. I obtained the enrollment and job statistics for the 1968-1969 school year and put these figures in the form of a table. To obtain a comparison for the 1969-1970 and 1970-1971 school years and to find out where the 1969 and 1970 graduates went I sent a questionnaire chart similar to the one for the 1968-1969 school year to the Oregon community colleges offering Forest Technology programs. A 100 percent return of the chart questionnaire was obtained and the results are presented in

Appendix B.

The number of Oregon forest technician graduates has steadily increased. In 1968 there was a total of 30 graduates. An increase of 19 graduates raised the total figure in 1969 to 49. As the Forest Service in Region 6 anticipated, the number of grads in 1970 nearly doubled that of 1969. The total of 85 grads in 1970 was an increase of 36 from 1969. Another addition of 35 graduates is expected in 1971 and the result would be a total of 120. A general increase in the production of technician graduates is expected to continue unless a restriction is placed on enrollment. The Forest Service hired seven forest technician graduates from Oregon community colleges in 1969, while in 1970 twenty-seven technician graduates were employed. As of April 15, 1971 a total of 35 Oregon technicians have been offered jobs with the Forest Service. This type of trend is also evident in other public agencies and some federal government agencies have publicly announced a greater interest in the forest technician programs at community colleges (SAF Forum of Technical Forestry Training, 1970 and 1971).

A decrease in expected enrollment at some Oregon community colleges for Fall Term 1971 stems from a limit which may be placed on the number of new students allowed to enter the Forest Technology program.

North Pacific Technician Training Forum - Entry Jobs for 1969 Forest Technology Graduates. Twenty schools, seventeen in

the United States and three in Canada are included in this survey. Thirteen of the twenty schools reported 203 graduates in 1969 and six of the U.S. schools reported that their first graduating class would be in 1970.

Table 7. Number of Schools by States or Provinces Which Participated in the 1969 Survey on Forest Technician Production and Employment Opportunities in the North Pacific

States or Provinces	With 1969 Grads	Without 1969 Grads	Total
Alaska		1	1
Alberta	1		1
British Columbia	2		2
California	1		1
Idaho	1		1
Montana	1	1	2
Oregon	4	1	6*
Washington	3	3	6
	13	6	20

* Includes one school not reporting

Results of the survey from the North Pacific Technician Training Forum are given in Appendix C. In U.S. schools two-thirds of the graduates entered forest technology employment mostly in timber management operations although forest engineering and forestry research attracted a reasonable number of graduates. Fire control and forest recreation were minor fields for entry employment.

In Canadian schools 95 percent of the graduates entered forest technology employment in timber management with forest engineering the other major emphasis area.

In U.S. schools most graduates went to Federal, industry, and state organizations; in that order. In Canada most graduates went to industry, about 30 percent to the provinces, and very few to federal agencies.

> The United States is formally preparing about 3.9 professional foresters to one technician, whereas Canada is formally preparing about 3.3 technicians to one professional. Industrial and Federal personnel in forest management in the United States have expressed the belief that three or four formally trained forest technicians should be educated for every professional forester in the future (United States Department of Health, Education, and Welfare, 1968).

Job opportunities may become more readily available for forest technicians if the U.S. follows Canada's ratio of hiring approximately 3 technicians to one professional.

SUMMARY

1970 Questionnaire Summary

The majority of forest technician instructors indicated that government agencies and usually private industry actively recruit for forest technician graduates. When these employers do not interview on campus they send the technician instructors job openings or else call the instructors when jobs become available. Job opportunities for permanent positions have been good for forest technician graduates. The most interested employers vary with the locality of the community colleges, but the Forest Service was said to be the overall most active

participant. Summer job openings for forest technicians have been excellent with government agencies and fair with private industry. The United States Forest Service sends official student requisitions to the community colleges during Winter Term and interested students fill the requisitions. The technician programs do not have part-time jobs available for technicians during the school year. Student-help facilities or work-study programs often aid technicians in obtaining financial assistance.

Employment Opportunities for Forest Technicians Summary

At present the supply of graduate forest technicians has fulfilled the demand for this type of forest resource worker. The number of schools initiating forest technician programs decreased to three in 1969 and opposition to the development of any more new programs has been voiced by the 1971 Society of American Foresters Forum of Technical Forestry Training. The United States Forest Service Region 6 is leading the way in the promotion and hiring of graduate forest technicians. This Federal agency hopes to attain a forest technician to professional forester ratio of 3 or 4 technicians to 1 professional. The Forest Service is also the primary employer of forest technicians for summer positions. At present private industry is hiring few forestry personnel, but many private firms in the questionnaire survey expressed the opinion that graduate forest technicians possessed the qualifications to fill a forestry

position and that this type of individual would be the first choice for forestry employment. Permanent employment for Oregon forest technician graduates was greatest with private industry until 1970 when the Forest Service began extensive hiring of graduate forest technicians. To help obtain a balance between the supply and demand for forest technicians most of the Oregon community colleges are going to place a limit on the number of new forest technician students being allowed to enter the program this Fall.

CONCLUSION

The graduate forest technician is an integral part of the forestry profession. Duties performed by the forest technician will free the professional to concentrate his time on decision-making affairs in forest management, forest ecology, forest recreation, etc. More forest technicians need to be employed by the forestry profession in the United States so professionals will be allowed to focus their efforts on these areas of forestry. Due to poor economic conditions the demand for graduate forest technicians in 1971 has not increased. Presently all available jobs for forest technicians have been supplied with 1971 graduates. Enrollment of students in existing Forest Technology programs is still increasing. To obtain a more desirable supply-demand ratio the quality of forest technician programs should be up-graded so that only the best qualified

students will succeed. Class size should be limited to a number of students which the forest technician instructor feels he can educate to proficiency. At present Oregon has enough Forest Technology programs to furnish the labor market with graduates and no new programs should be initiated. Employers anticipate an economic improvement in the wood products industry and an increase in employment of forest technicians in 1972. Job opportunities for forest technicians at Oregon community colleges should become more readily available if this forecast comes true.

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A P P E N D I X

APPENDIX A

Breakdown of Past, Present, and Future Demand for Forest Technicians in Private Forestry

Private Companies	Past, Present and Future Employment by Years					
	1969*	1970	1971	1972	1973	Total
Alford Logging Co. - Oregon City	-	-	-	-	-	0
Bohemia Lumber Co. - Culp Creek	-	-	-	-	-	0
Boise Cascade - Joseph	-	-	-	-	-	0
" " - LaGrande	1	1	-	-	-	2
" " - Medford	-	-	-	-	-	0
Brooks-Scanlon Co. - Bend	-	-	-	-	-	0
Crown Zellerbach - Molalla	-	-	-	-	-	0
" " - Seaside	-	-	-	1	1	2
" " - Portland	1	-	-	-	-	1
" " - Tillamook	1	-	-	-	-	1
Cuddleback Lumber Co. - Eugene	-	-	-	-	-	0
Frank Lumber Co. - Mill City	-	-	-	-	-	0
Georgia-Pacific - Coos Bay	-	-	-	-	-	0
" " - Pilot Rock	-	-	-	-	-	0
" " - Springfield	-	-	-	1	-	1
Giustina Bros.Lbr.& Ply.- Eugene	-	-	2	-	-	2
Hanel Lumber Co. - Hood River	-	-	-	-	-	0
Hines, Edward Lbr. Co. - Hines	-	-	-	-	1	1
" " " " - John Day	-	-	-	-	1	1
" " " " - Westfir	2	-	-	-	-	2
Hub Lumber Co. - Roseburg	1	-	-	-	-	1
International Paper Co. - Gardner	2	-	-	-	-	2
" " " - Vaughn	-	1	-	2	2	5
Kinzua Corp. - Kinzua	-	-	-	-	-	0
Klamath Lumber Co. - Klamath Falls	-	-	-	-	1	1
Medford Corp. - Medford	-	-	-	-	-	0
Publishers Paper - Oregon City	2	-	-	1	1	4
" " - Portland	-	-	-	-	-	0
Rosboro Lumber Co. - Eugene	1	1	-	-	-	2
Seneca Sawmill - Eugene	2	-	-	1	-	3
Simpson Timber Co.-Shelton,Wash.	1	-	-	-	1	2
Standley,J.R.& Sons Logging-Roseburg	-	-	-	1	2	3
Sun Studs, Inc. - Roseburg	-	-	-	-	-	0
Weyerhaeuser Co. - Cottage Grove	8	-	-	-	-	8
" " - Klamath Falls	12	15	2	1	1	31
" " - Longview,Wash.	4	5	2	2	2	15
" " - Molalla	2	2	2	2	2	10
" " - North Bend	1	2	-	-	-	3
" " - Springfield	1	4	1	-	-	6
Willamina Lumber Co.-Willamina	-	-	-	-	-	0
Zip-O-Log Mills - Eugene	1	-	-	-	-	1
	43	31	9	12	15	110

*Some companies included graduate forest technicians hired before 1969.

1968-1969 OREGON FOREST TECHNICIAN - ENROLLMENT AND JOB STATISTICS

	Employment of Graduates by Job - 1968								1968-1969 Enrollment		Forecast** 1969 Grads	
Community College	Army	USFS	BLM	State	Private Forestry	Wood Prod.	Other	TOTAL	1st yr.	2nd yr.	W/Jobs + Employers	W/O Jobs Available
Central Oregon		5		1				6	38	12	3	3
Clatsop	3	1			3		4	11	22	10	0	10
Lane		First two-year course						0	37	12	4	6
Mt. Hood		New course						0	14			
Salem	1	1			4		1	7	38	8	7	0
South-western		No records							11	3	0	3
Umpqua	4				1		1	6	25	10	0	9
TOTALS	8	7		1	8		6*	30	185	55	14	31

*1. Three students were reported to have gone on to 4-year universities.
2. Three students were hired before graduation and dropped out.

**Sampled in February 1969.

1969-1970 OREGON FOREST TECHNICIAN - ENROLLMENT AND JOB STATISTICS

	Employment of Graduates by Job - 1969									1969-1970 Enrollment		Forecast 1970 Grads**	
Community College	Army	USFS	BLM	State	Wood Prod.	Private Forestry	Other	Un-known	TOTAL	1st yr.	2nd yr.	W/Jobs + Employers	W/O Jobs Available
Central Oregon	2	2	0	1	0	0	2		7	39	21	4 (3--USFS) (1--State)	14***
Clatsop	2			1		2		5	10	20	15	5	6
Lane	1	2	3			4			10	60	15	8	2
Mt. Hood		No 1969 graduates							0	17	7	6	1
Salem-Chemeketa	1	3			2	2			8	40	29	15	14
South-western		1				2			3	28	11	6	0
Umpqua		1	4			2		4	11	45	10	9	2
TOTALS	6	9	7	2	2	12	2*	9	49	249	108	53	39

*1. One student continued his education at O.T.I. for a 4-year degree.
2. One student went to work as Asst. Water Master in Deschutes County.

**Sampled in March 1970.

***7 of these grads plan to continue their education.

Community College	Employment of Graduates by Job - 1970										1970-71 Enrollment		Forecast 1971 Grads**		Forecast Fall 1971	
	Army	USFS	BLM	St. of Ore.	St. of Wash.	Wood Prod.	Private Forestry	Other	Un-known	TOTAL	1st yr.	2nd yr.	W/Jobs + Employers	W/O Jobs Available	Expected Enrollment 1st yr.	2nd
Central Oregon	2	8					1	2	1	14	80	25	12 12--USFS	5	80	35
Chemeketa	3	2	5	4		6	3	1		24	75	27	19 3--USFS 3--BLM 5--Private 3--St.Oreg. 5--Service	5	70	55
Clatsop	1	4		2	4		1	1		13	36	17	4 2--USFS 2--St. Oreg.	10***	35	25
Lane	1	3	3				1		1	9	104	17	5 2--USFS 2--BLM 1--Private	10	40	36
Mount Hood		4						3	1	8	54	15	8 6--USFS 2--Ore.Caves	6	60	50
South-western	2	2					2	2		8	45	22	8 4--USFS 1--BLM 3--Private	6****	35	40
Umpqua	1	4	2				1		1	9	60	25	11 6--USFS 3--Private 2--St. Oreg.	11	50	28
TOTALS	10	27	10	6	4	6	9	9*	4	85	454	148	67	53	370	269

*Notes: 1. 5 students continued their education. 2. 1--State of Michigan forestry. 3. 1--quality control, steel. 4. 1--commercial fishing. 5. 1--ranching.

**Samples in April 1971. ***3 of these graduates are continuing their education.

****2 of these graduates are continuing their education.

APPENDIX C

North Pacific Technician Training Forum - Entry Jobs for 1969 Forest Technology Graduates

Basic Data Questionnaire of Forest Technician Production And Employment Opportunities All N.W. United States

Schools Reporting Grads - 10
Schools Reporting No Grads - 6
Schools Not Reporting - 1
Total 17

1969 Graduates (Only) = 92

			Post-Graduate Employment Field			
Employer	No. Of Grads	Tbr.Mgt. Opera- tions	Forest Engr.	Fire Control	Forest Recreation	Forestry Research
Forest Industry Part Time						
Forest Industry Full Time	18	13	4			1
State Agencies Part Time						
State Agencies Full Time	7	2		2		3
Federal Agencies Part Time	6	5	1			
Federal Agencies Full Time	22	13	4		3	2
City or County Part Time						
City or County Full Time	2	1	1			
Military Service	9)					
Non-Forest Work	5)					
Return to School	11)	37				
Unemployed	2)					
No Information	10)					
	(92)					
Totals	55	34	10	2	3	6

Basic Data Questionnaire of Forest Technician
Production And Employment Opportunities
All S.W. Canada

Schools Reporting Grads - 3
Schools Reporting No Grads -
Schools Not Reporting - -
Total 3

1969 Graduates (Only) = 111

		Post Graduate Employment Field				
Employer	No. Of Grads	Tbr.Mgt. Opera- tions	Forest Engr.	Fire Control	Forest Recreation	Forestry Research
Self-Employed (Forest Work)						
Forest Industry Part Time	1	1				
Forest Industry Full Time	68	51	16			1
Provincial Agencies Part Time	5	5				
Provincial Agencies Full Time	28	20	3	1	2	2
Federal Agencies Part Time						
Federal Agencies Full Time	3				3	
City or County Part Time						
City or County Full Time						
Military Service						
Non-Forest Work						
Return to School	1)					
Unemployed	1) 6					
No Information	4)					
	111)					
Totals	105	77	19	1	5	3

Basic Data Questionnaire of Forest Technician
Production And Employment Opportunities
North Pacific - U.S. & Canada

Schools Reporting Grads - 13
Schools Reporting No Grads - 6
Schools Not Reporting - 1
Total 20

1969 Graduates (Only) - 203

			Post-Graduate Employment Field			
Employer	No. Of Grads	Tbr.Mgt. Opera-tions	Forest Engr.	Fire Control	Forest Recreation	Forestry Research
Self-Employed (Forest Work)						
Forest Industry Part Time	1	1				
Forest Industry Full Time	86	64	20			2
State & Provincial Agencies Part Time	5	5				
State & Provincial Agencies Full Time	35	22	3	3	2	5
Federal Agencies Part Time	6	5	1			
Federal Agencies Full Time	25	13	4		6	2
City or County Part Time						
City or County Full Time	2	1	1			
Military Service	9)					
Non-Forest Work	5)					
Return to School	12)43					
Unemployed	3)					
No Information	14)					
	(203)					
Totals	160	111	29	3	8	9

APPENDIX D

Average Starting Salary or Grade of 1970 Graduates

Community College	Dollars Per Year USFS	State Oregon	State Wash.	Private Forestry
Central Oregon	5853 (GS-4)			6750
Chemeketa	5853			
Clatsop	5853	6240	6372	
Lane	5853			
Mt. Hood	5853			
Southwestern Oregon	6548 (GS-5)			7500
Umpqua	5853			

APPENDIX E

Questionnaire Study Report - Spring 1970 Survey

1. Does either industry or government hold interviews or recruit at your community college for forest technician graduates or for forest technician students to fill summer positions?

Southwestern Oregon Community College

Yes, both industry and government actively recruit for forest technician students.

Central Oregon Community College

(Summer) The United States Forest Service recruits intensively through the Supervisor's Office of the Deschutes National Forest in Bend. We usually have job offers for summer positions (in the form of student requisitions) in such quantity that we have to send back about 12-18 that we cannot fill due to the fact that we do not have enough available students.

The Bureau of Land Management occasionally recruits a few for summer work, but usually our students are all hired prior to the time their offers come in.

State Forestry Department has (on occasion) hired summer employees, but it has been extremely limited.

Industry has not interviewed or recruited for summer positions.

(Graduates) United States Forest Service has interviewed, but mostly hired (without an interview) by going through the

local Forest Supervisor's Office. Most of our graduates have gone this route.

Private industry has interviewed one graduate from our 2-year technician program, but did not hire him. Two were interviewed and hired from our 1-year program five years ago. A surveyor from Baker is interviewing for two surveying positions this week.

State Forestry has never actively recruited, but did visit us last year. They have taken a couple of our graduates when they applied.

Umpqua Community College

The Forest Service sends us job openings and some industries call when they have jobs open.

Lane Community College

Both industry and government have recruited for forest technician graduates and for students to fill summer positions each year since the college was started.

Clatsop Community College

Yes. The State (Oregon and Washington) as well as the United States Forest Service call upon us for both full time and summer positions.

Private industry lets us know of openings for technicians.

Chemeketa Community College

Both the State and the United States Forest Service conduct interviews on campus for summer and full time jobs.

Mt. Hood Community College

We have had industry men interview our second year students, but they were east of the Mississippi River so we had no student response. The Forest Service hired 6 students by interview on student requisitions.

2. What are the job opportunities for the forest technician graduates at your community college and where have the graduates been going?

Southwestern Oregon Community College

Due to limited follow-up on previous graduates, statistics are not available beyond 1969. Industry has employed last year's graduates. Many governmental agencies are actively seeking this year's graduates. The job opportunities at this time (1970) appear excellent.

Central Oregon Community College

The United States Forest Service on the eastern side of the Cascades in Oregon primarily, is where graduates have gone--Paisley, Bend, Crescent, Sisters, John Day, Klamath Falls, Prineville, Chemult, Silver Lake, and Maupin in Oregon (one USFS position filled in North Idaho)--are places graduates have gone (not all 2-year men, many 1-year men).

Three have hired out to the State ((all 2-year graduates--Klamath Falls, Tillamook (now in Salem), and Portland area (now in Army)).

We are limited in placement (at least up till now)

because we have had to depend almost entirely on the USFS for hiring our students. We have placed all of our graduates who desired to go to work in the field and were not about to be drafted.

Umpqua Community College

Most of the job opportunities are in the Forest Service or Bureau of Land Management and most of our graduates have gone there.

Lane Community College

We have had no problems in employment to date (1970). There have been more jobs than students to fill them. This year we may find it pretty tight, but 90% have jobs to this date.

Clatsop Community College

About 40% to industry

About 30% to public agencies

30% - elsewhere

Chemeketa Community College

Job opportunities are varied from year to year. Our graduates have been about evenly divided between government and private industry. An additional item of interest here is the number of graduates who either right after school or in a year or two enter a four year Forestry school.

Mt. Hood Community College

At the present time the government agencies are taking the majority. It would appear that industry is "holding off" until market conditions and demand for forest products improve.

3. What are the possibilities for students to get on-the-job experience in forestry for industry or for government during the summer after they have completed the first year of study?

Southwestern Oregon Community College

Excellent! Most students can easily get employment with private industry, state organizations, or federal agencies. The United States Forest Service has offered student requisitions to those particularly interested in working on a National Forest in our area. Many private surveying companies are looking for summer help with forest technology students.

Central Oregon Community College

We have more openings offered by the United States Forest Service than we have students. Some offers from the Bureau of Land Management and State Forestry if students pursue the issue. Practically no offers from private industry for summer employment.

Umpqua Community College

The possibilities are good. As a requirement for graduation we insist on three months work in a forest related industry. For this the students get six units.

Lane Community College

Five credits of course work are required in connection with an approved forestry job of 30 hours or more a week. We have all our students employed this year and have never had a problem with summer employment.

Clatsop Community College

Real Good! Mainly with the State of Oregon and with the

United States Forest Service.

Chemeketa Community College

Until this year we have had more job opportunities than students for summer forestry work.

Mt. Hood Community College

As stated in #2, this applies to first-year students as well. The Forest Service has the greatest possibilities.

4. Are any programs in effect to help these forestry students who need to work part-time while going to college?

Southwestern Oregon Community College

Whenever a student indicates a need to work during the term, he is referred to student-help facilities of the college. Any requests for help by employers are immediately made known to prospective part-time students.

Central Oregon Community College

None for foresters only. Some students find part-time work on their own or through student services. The United States Government sponsored work-study program does give a few foresters some work.

Umpqua Community College

There are no specific jobs for Forestry students. There is a work-study program open to all students who need financial assistance.

Lane Community College

Only through regular placement service in non-technical

non-major jobs.

Clatsop Community College

Yes. Work-study on campus.

Chemeketa Community College

The college maintains a part-time job referral service for all students.

Mt. Hood Community College

Assistance is afforded in extreme cases thru reading-conference type of instruction.