

PACKET OF OVERHEAD MATERIALS AND EXHIBITS

USED IN PRESENTATION OF

SOUTHWESTERN WASHINGTON STUDY

Presented by Pat McLachlan
February 26, 1986

To the Environmental Committee
of The Evergreen State College

"HAVE" COUNTIES - Thurston, Pierce, Kitsap, Clark,
King

REOCCURRING ISSUES:

Education

- Retraining of employees
- Providing and funding adequate K-12 and higher education
- Preparing students for the information society of the future
- Setting up partnerships between business and education
- Strengthening TESC's service to southwest Washington

Economic Development

- Diversifying the economy
- Achieving planned and balanced growth
- Developing new jobs that require a high degree of skill and that are highly paid
- Marketing of counties as good locations for new businesses
- Increasing growth of high tech companies

Public Services

- Changing the tax base so that it is more predictable, flexible and fair
- Providing efficient and adequate government services on reduced budgets due in part to loss of federal revenue sharing monies
- Engaging in cooperative and long range planning
- Providing day care facilities
- Fulfilling increasing demands by population of unincorporated areas for county to provide urban-type services
- Building infrastructure in business parks in order to attract new businesses
- Improving the judicial system
- Supporting civil rights issues
- Negotiating a comparable worth settlement

Environmental Concerns

- Protecting the environmental resources of air, water farmland and wildlife
- Investigating alternative energy resources

Society/Culture

Addressing problems caused by the changing make-up
of the family
Supporting cultural activities
Encouraging citizens to be more active in government

COMMUNITY LEADER

Multiple County Perspective

....Hubert Humphrey is one of my heroes, and he said that a measure of a society is the way it deals with the least of its citizens. Go up to Neah Bay and take a look at how many Native Americans are working or not working - their unemployment is just astronomical - we do a good job at counting Blacks unemployment rates because they go into unemployment offices more often - we don't count Native Americans as often. The health indices for that community are off the charts; alcoholism, mental health, infants born with alcohol/substance abuse dependency....
[ave problems].

LEGISLATOR

Thurston County

....Well, I think we're doing well in this area. TESC has continued to grow and has become a very positive force in the community and even touted as one of our resources which is kind of fun and kind of unusual. I guess educationally what I'd like to see in the coming years is to see TESC continue to grow and strengthen as a regional university so that it provides programs for the southwest area of the state as well as all of Puget Sound...

....I think TESC could play a very effective role in helping us set the public agenda for the next four years - next ten years and doing so by providing us with some good data, by sponsoring some conferences that would include government people, by working in a joint relationship with more state agencies on the types of things those state agencies are trying to accomplish....

COMMUNITY LEADER

THURSTON COUNTY

...I see TESC and community role intertwining over the next century; I'm hopeful it will do so in a diffused way - all kinds of threads - the Alumni Association, older students, internships, cultural entertainment offerings. It's such a marvelous institution it needs to keep its light lit, and I hope it responds to community needs without getting away from what I consider to be its main strength; which is to produce people who have arts and sciences backgrounds and who learn how to think and to do well on their own and can go to graduate school and shine because they're used to speaking for themselves instead of listening to what the instructor tells them...

COMMUNITY LEADER

Multiple County Perspective

I think the best scenario would include greater neighborhood and over all community participation in the political system, which I think would lead to a greater awareness of more progressive solutions to problems. I think that..the public policy makers *are* woefully unprepared to address the large issues such as economic development and so on. They address them from a very traditional viewpoint which is that economic development is basically the province of businessmen and that neighborhood folks and labor folks and working people in general *don't* understand the situation, which I think is wrong - and second, that they don't have any place in the process that addresses that. I would like to see an opening of the process so that these groups that I don't feel are presently involved in the process are involved in the process...

....I think the most important thing a system of socialization can do is to turn out people who can critically analyze what they're looking at. Who can take an issue, a problem and look at it and break it down and really understand what is happening....

COMMUNITY LEADER

THURSTON COUNTY

....Well, our personal resources are enlightened citizens; and people ^{can} can go to the legislature. People who sense that it's all our responsibility. At the same time we have to be creative about it - intelligent about it. We know that we need jobs, because jobs are the economic vitality that pay the taxes. On the other hand, if we have a wasteland, then what do we really have?....

....In Thurston County I think the problem is to develop the property that we've been given here in this area. That we develop it with a sense of balance. That we're not all business or all city or all farm land - that it's an intelligent balance of those resources, harmonizing with each other. The educational base of the leaders for the year 2000 and beyond - realizing that life is more than just a pay check. That's not to say that a pay check is not important but the pay check should enable us to keep the quality of life here.....

COMMUNITY LEADER

Wahkiakum County

....To train people - there's nothing like unemployment to get people back to school. Some of these jobs for people just out of high school seemed so lucrative and so secure - all of a sudden they're gone - a lot of our young people are going back to be trained in nursing, whatever areas they can work in at LCC for a start. And, certainly, education is seen as a real hope now where as before it was - well, I can do just as well without it - now we don't have that. In the time I've lived here - 58 years (I'm 60) - I've seen where the young people that graduated from Cathlamet were able to work in the area and slowly but surely they began to have to go out of town and away. I've seen Grays Harbor experience that and now the young people are moving away. A lot of them are heading for the colleges which they didn't do in the past. I can see where we were enjoying it, and we were losing it, and now we've all lost it...

COMMUNITY LEADER

King County

....I think my district is a reflection of what's happening in the United States. Very pronounced movement to a service sector economy; probably the best most graphic example is Microsoft which is right in the middle of the district; it's a worldwide player in software production and is and will continue to be a major employer...I would expect to see the Bellevue, Redmond and Kirkland area grow into a community that - from a business standpoint - will probably rival the Seattle area....I think we'll be a world class center for trade and some of the service sector economic changes. Microsoft keeps spinning off other companies - Microrim...I think we create an environment - those people are all interested in their kids and all obviously have a high premium on education. If we allow for those schools to maintain themselves as a good place then you'll attract those types of folks, and if we have good higher education institutions - probably the main one being UW - we make it an attractive area and allow technical things particularly to be taught with enough volume then I think we will remain very attractive; if we don't we won't....

...The third thing we can do quite a lot about is having a trained and educated workforce and one that's willing to work and put in a good day's work for a good day's pay. And I don't think we've got any problem there. I think that we can move to make sure that our education system is responsive to the demands out there. Particularly in an economy where we're just going to have to retrain all the time.

COMMUNITY LEADER

COWLITZ COUNTY

....There is a very strong need for upper level college programs for educators in this community. It is virtually impossible for an educator to work on a master's degree without relocating or commuting down to Portland - if you teach full-time, that's an unreasonable demand...

COMMUNITY LEADER

Mason County

....There is for sale at this present time an ITT Research Lab on Hood Canal. And, I believe that TESC, the governmental structure, the school district, Shelton, should purchase that research lab that's presently for sale for \$310,000 and develop that so that we are unique in training high school students and college students to work in the area of marine biology...

COMMUNITY LEADER

Pierce County

....These are problems, or perhaps more accurately challenges that need to be addressed - managing the growth, ^{the} need for land use planning, ^{the} need to manage the growth in such a way that the livability continues to be there so we don't have strip development - neon kinds of strips without the inviting pleasant kinds of environment for people to want to live in...

INDUSTRY

Agriculture/Forestry/Fishing

- Agricultural Production - Crops
- Agricultural Production - Livestock
- Agricultural Services
- Forestry
- Fishing, Hunting and Trapping

Mining

- Metal Mining
- Bituminous Coal and Lignite Mining
- Oil and Gas Extraction
- Nonmetallic Minerals, Except Fuels

Construction

- General Building Contractors
- Heavy Construction Contractors
- Special Trade Contractor4s

Manufacturing

- Food and Kindred Products
- Textile Mill Products
- Apparel and Other Textile Products
- Lumber and Wood Products
- Furniture and Fixtures
- Paper and Allied Products
- Printing and Publishing
- Chemicals and Allied Products
- Petroleum and Coal Products
- Rubber and Misc. Plastic Products
- Leather and Leather Products
- Stone, Clay and Glass Products
- Primary Metal Industries
- Fabricated Metal Products
- Machinery Except Electrical
- Electric and Electronic Equipment
- Transportation Equipment
- Instruments and Related Products
- Miscellaneous Manufacturing Industries

Transportation and Public Utilities

- Local and Interurban Passenger Transit
- Trucking and Warehousing
- Water Transportation
- Transportation by Air
- Pipe Lines, Except Natural Gas
- Transportation Services

Communication
Electric, Gas, and Sanitary Services

Wholesale Trade

Wholesale Trade - Durable Goods
Wholesale Trade - Nondurable Goods

Retail Trade

Building Materials and Garden Supplies
General Merchandise Stores
Food Stores
Automotive Dealers and Service Stations
Apparel and Accessory Stores
Furniture and Home Furnishings Stores
Eating and Drinking Places
Miscellaneous Retail

Finance, Insurance, and Real Estate

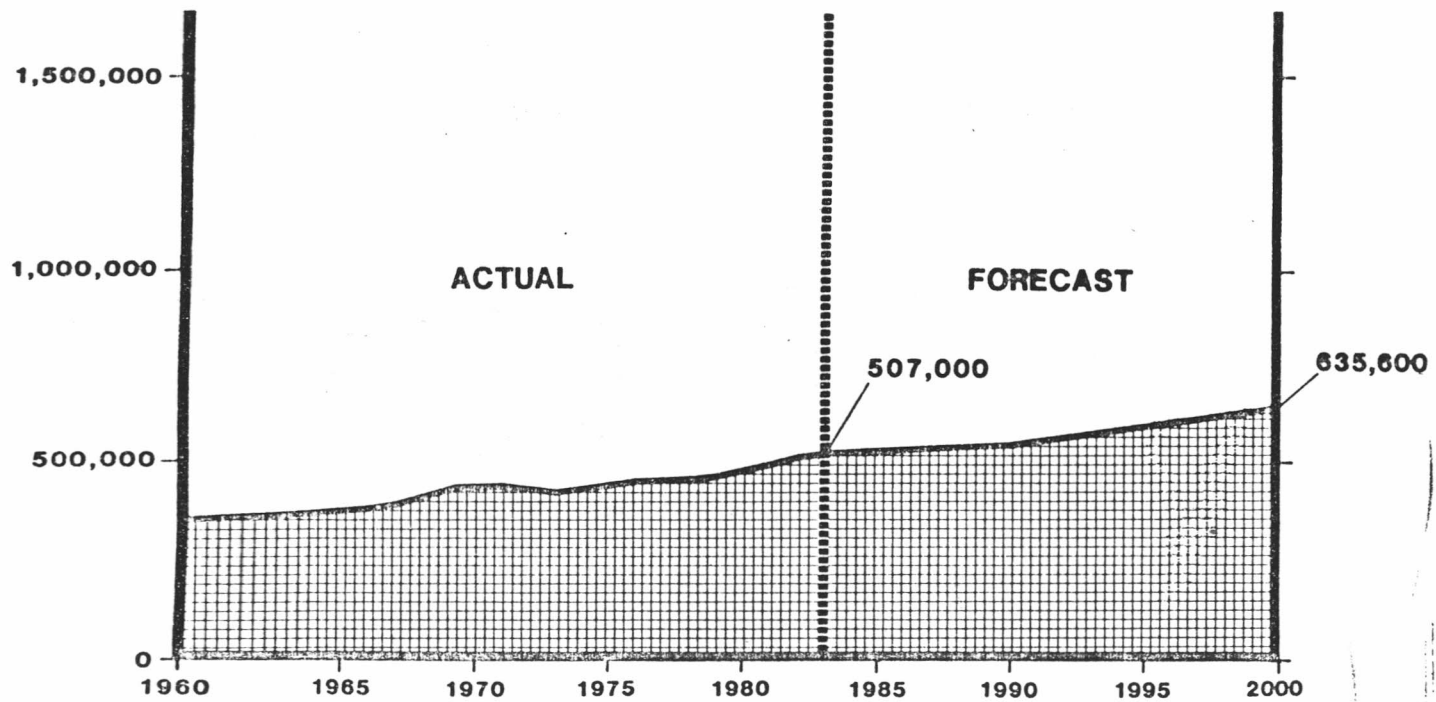
Banking
Credit Agencies Other Than Banks
Security, Commodity Brokers and Services
Insurance Carriers
Insurance Agents, Brokers and Service
Real Estate
Combined Real Estate, Insurance, Etc.
Holding and Other Investment Offices

Services

Hotels and Other Lodging Places
Personal Services
Business Services
Automotive Repair Services and Garages
Miscellaneous Repair Services
Motion Pictures
Amusement and Recreation Services
Health Services
Legal Services
Educational Services
Social Services
Museums, Botanical, Zoological Gardens
Membership Organizations
Private Households
Miscellaneous Services
Nonclassifiable Establishments

Government

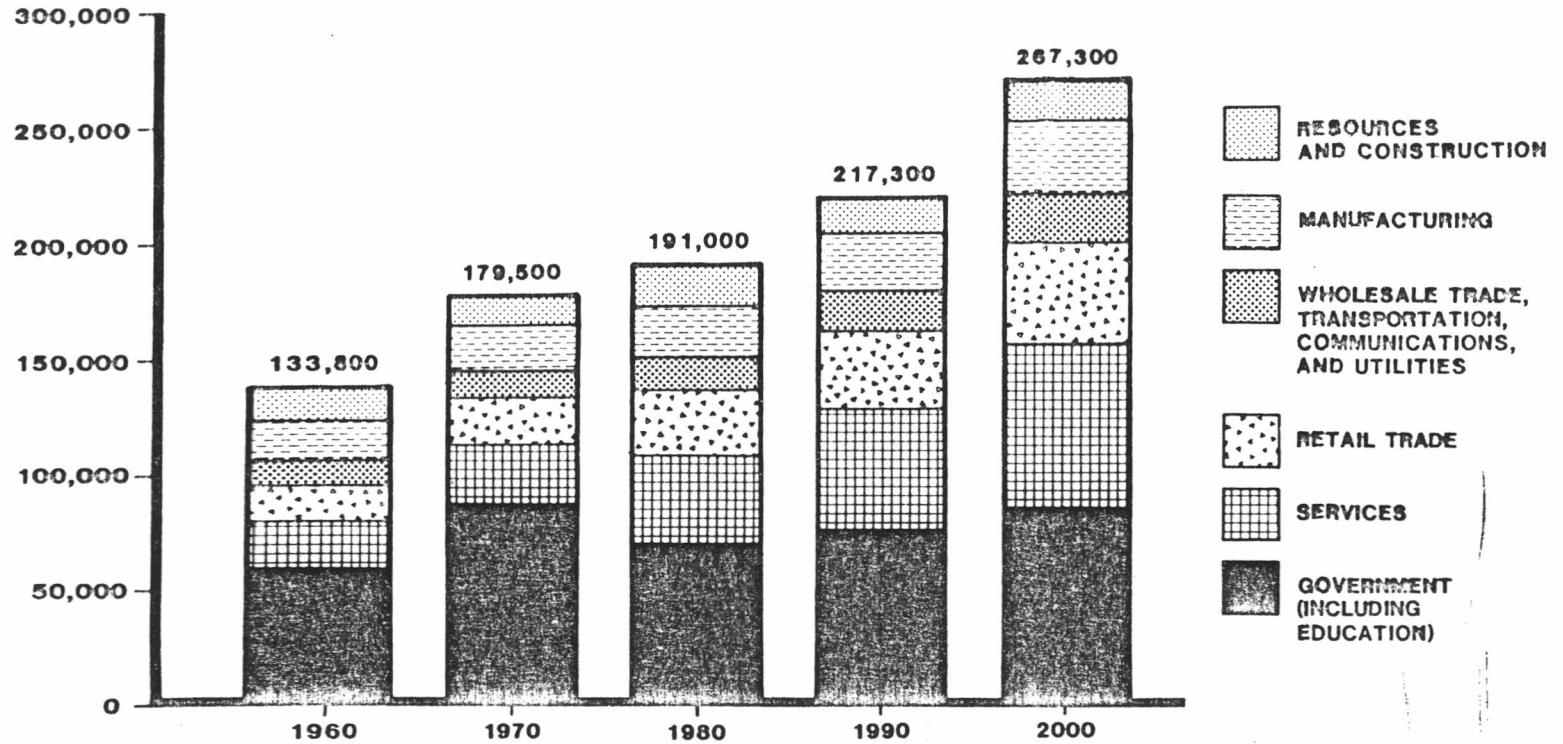
Federal Government
State Government
Local Government



PSCOG

TOTAL POPULATION - PIERCE COUNTY

FIG. 6
4/84

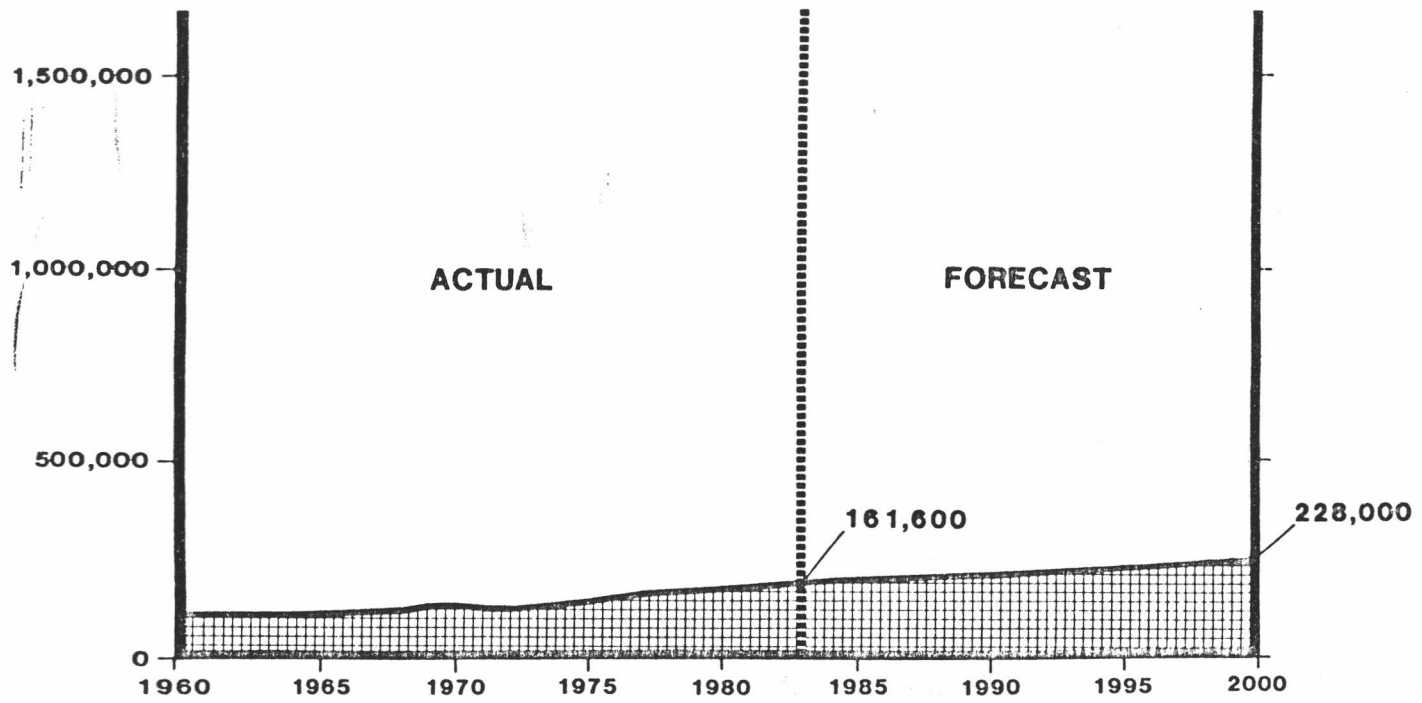


PSCOG

TOTAL JOBS - PIERCE COUNTY

FIG. 10

3/84

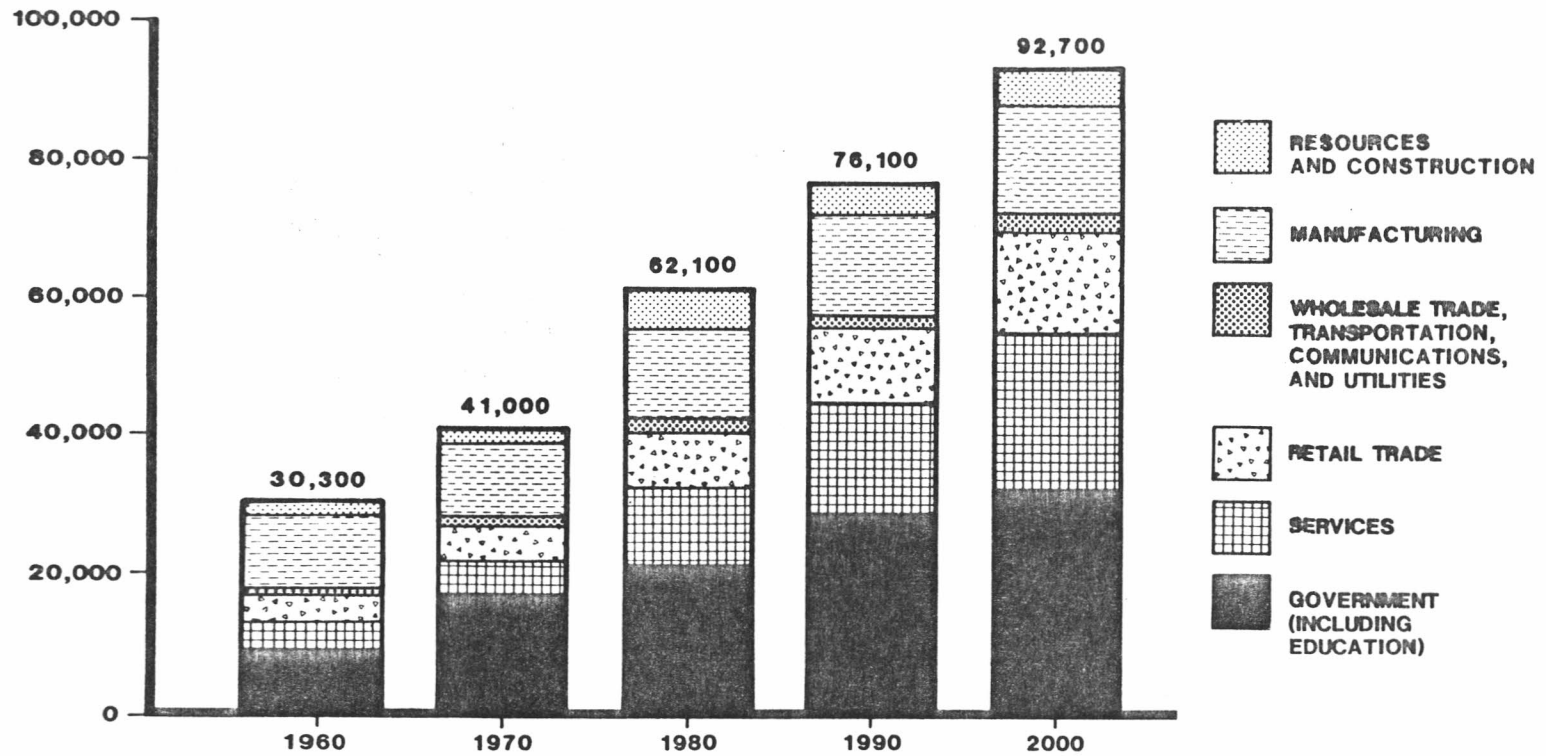


PSCOG

TOTAL POPULATION - KITSAP COUNTY

FIG. 5

3/84

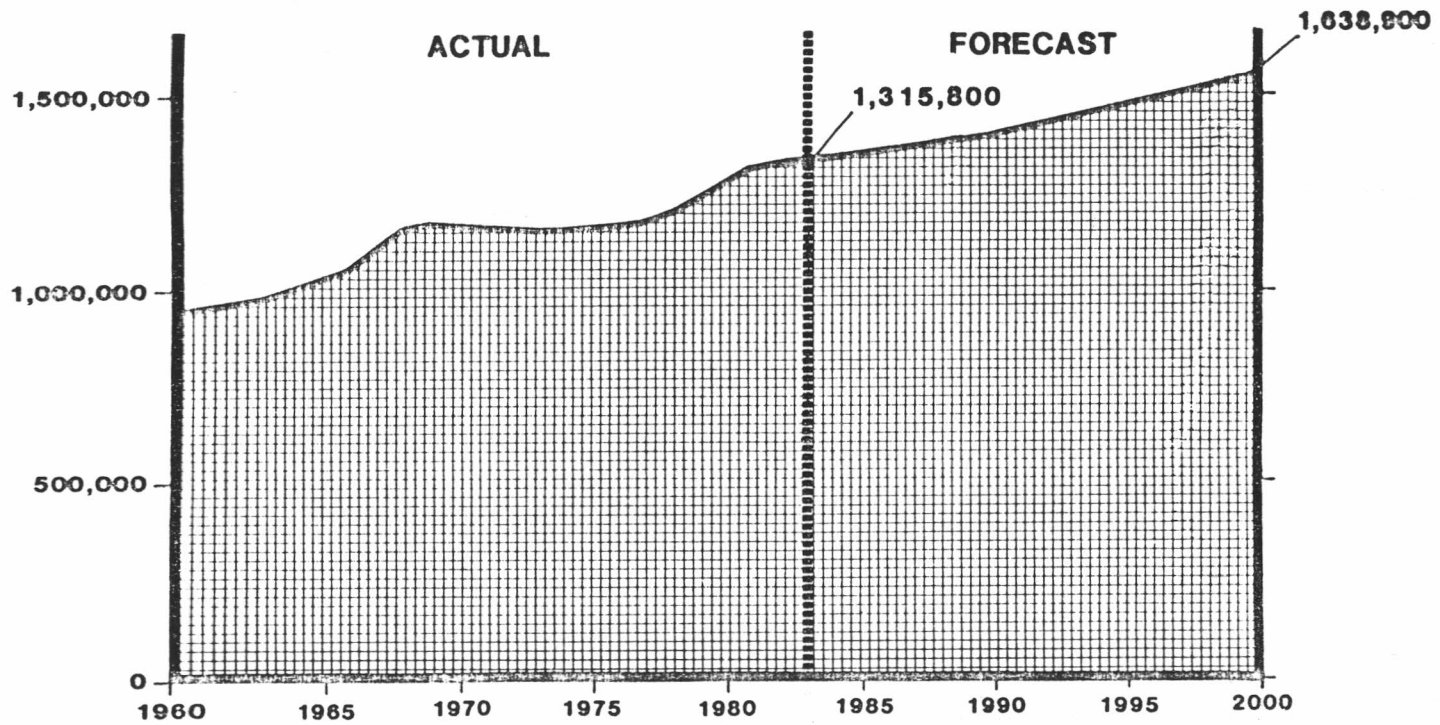


PSCOG

TOTAL JOBS - KITSAP COUNTY

FIG. 9

3/84

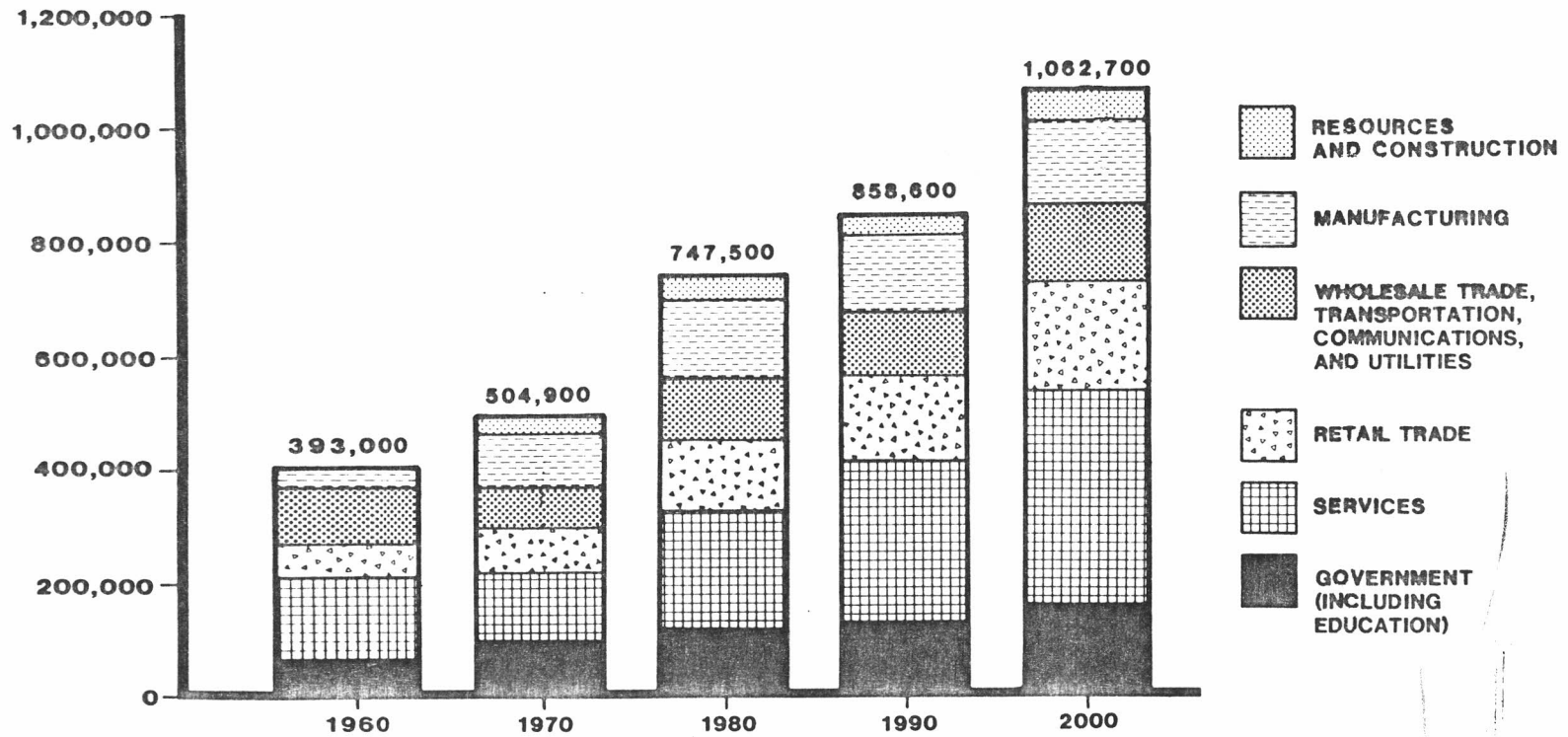


PSCOG

TOTAL POPULATION - KING COUNTY

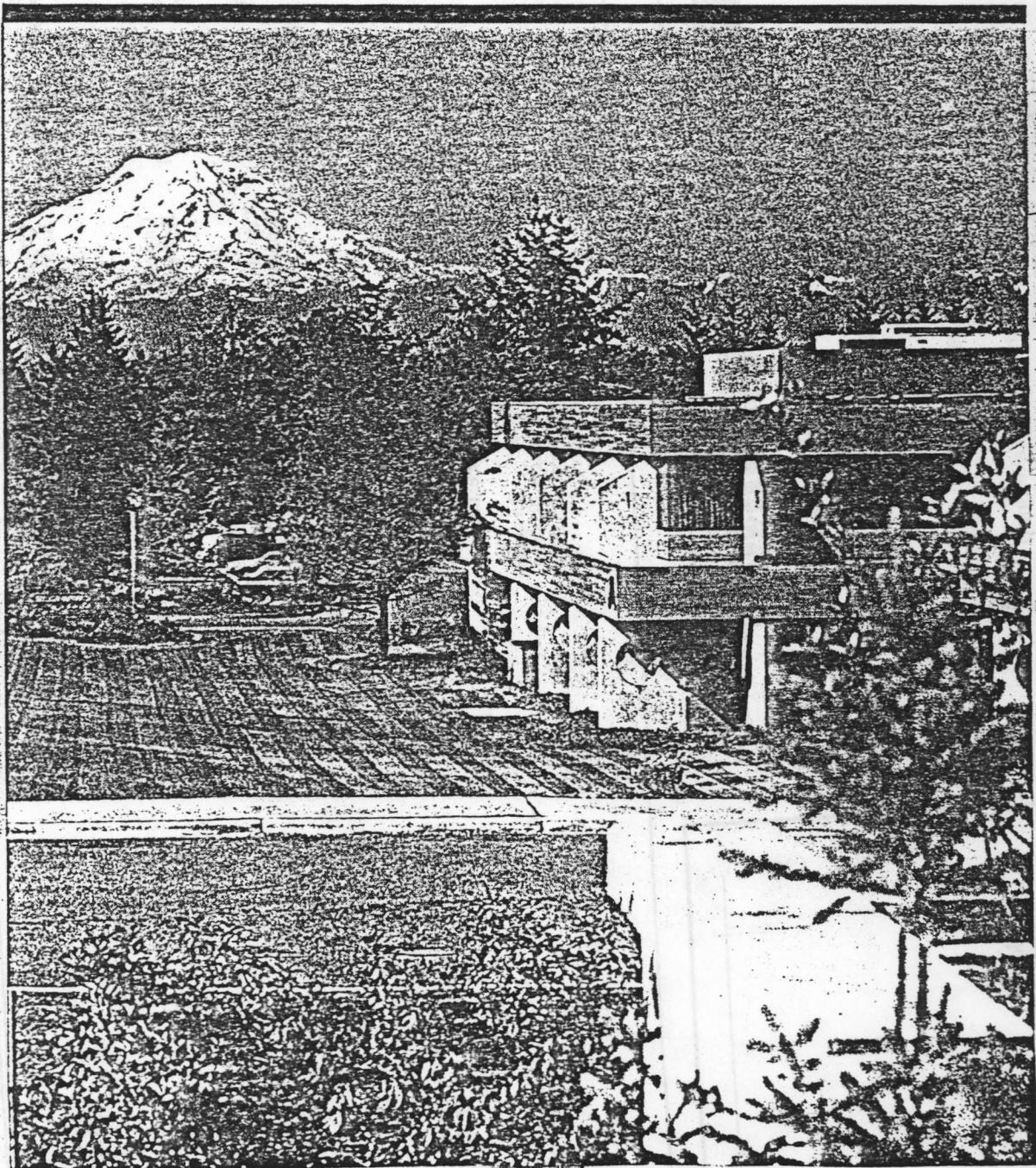
FIG. 4

3/84



1985

CENTRAL PUGET SOUND INDUSTRIAL PARKS GUIDE



\$3.00

KING COUNTY

Industrial Park Name Location

Leasing Agent
Broker Phone

Zoning
Class

Zoning
Agency

Area

Electricity

Water

Sewage System

Rail

Waterway

Public Transit

Highway(s)

Preloading
Requirements

Phone

157	WILLOWS NORTHWEST BUSINESS PARK N.E. 95th St. & Willows Rd. Redmond, WA 98052	Bruce Anderson Anderson & Assoc. 453-1815	Light Industrial	City of Redmond	Total Land Area: 2.5 acres Net Rentable Space: 29,500 sf Planned Expansion: none Total Vacant Space: none	y	y	y	y	n	n	y	I-405; SR-520	n	n
158	WILLOWS PARK 15201 N.E. 95th Redmond, WA 98052	Rob Aigner/ Brent Nicholson Coldwell Banker 455-8500	Light Industrial	City of Redmond	Total Land Area: 2.5 acres Net Rentable Space: 53,850 sf Planned Expansion: * Total Vacant Space: none	y	y	y	y	n	n	y	I-405	n	n
159	WILLOWS RIDGE 13245 N.E. 124th Redmond, WA 98052	Brent Nicholson/ Joe Steele/ Craig Wilson Coldwell Banker 455-8500	Business Park	City of Redmond	Total Land Area: 20.8 acres Net Rentable Space: 35,000 sf Planned Expansion: 300,000 sf Total Vacant Space: indust: 35,000 sf whs: 25,000 sf ofc: 10,000 sf	y	y	y	y	n	n	y	I-405	n	n
160	WOODINVILLE BUSINESS CENTER N.E. 177th Pl. & 134th Ave. N.E. Woodinville, WA 98072	Jerri Robinson Wescor, Inc. 622-6305	Light Industrial	King County	Total Land Area: 10 acres Net Rentable Space: 22,032 sf Planned Expansion: 140,000 sf Total Vacant Space: none	y	y	y	y	n	n	n	I-405; SR-522	n	n
161	WORK INDUSTRIAL PARK 8525 152nd N.E. Redmond, WA 98052	Sven Goldmans/ Gregg Willits Grubb & Ellis 454-3630	Light Industrial	City of Redmond	Total Land Area: 3.5 acres Net Rentable Space: 70,000 sf Planned Expansion: 105,000 sf Total Vacant Space: *	y	y	y	y	n	n	y	SR-520	n	n

NORTHLAKE PLAZA OFFICE BUILDING

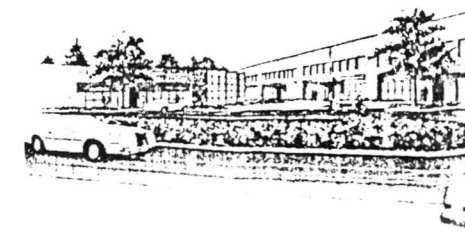
Description

- 3 story light textured gray exterior with solar double glazed window system.
- Variety of spectacular views, including Lake Union & downtown Seattle skyline.
- Attractively landscaped.
- Showers to accommodate joggers.

Location

- Situated adjacent to the north shore of Lake Union.
- Easily accessible from I-5, downtown Seattle and the University District.
- Near the Burke-Gilman Trail

Floor Space



SNOHOMISH COUNTY

Industrial Park Name / Location

Leasing Agency/
Broker Phone

Zoning
Class

Zoning
Agency

Area

Electricity

Natural

Water

Sewage System

Rail

Waterway

Public Transit

Highway(s)

Preloading
Requirements

Phis

13	MARYSVILLE NORTHWEST INDUSTRIAL PARK 136th N.E. & Paulsen Rd. Marysville, WA 98270	Dick Noffsinger Northwest Building Corp. 464-5252	Industrial	Snohomish County	Total Land Area: 125 acres Net Rentable Space: undeveloped Planned Expansion: build-to-suit Total Vacant Space: *	y	y	y	y	y	n	n	I-5	n	n
14	MERRILL CREEK CENTER 75th St. S.W. & Hardeson Rd. Everett, WA 98201	Mick Deines/ Jeff Rhodes Merrill Creek Assoc. 623-3784	Industrial	City of Everett	Total Land Area: 105 acres Net Rentable Space: undeveloped Planned Expansion: yes, * Total Vacant Space: *	y	y	y	y	n	n	y	I-5	n	n
15	NORTH CREEK BUSINESS PARK SR-527 & 180th Bothell, WA 98011	Robin Hansen Summit Co. 682-9525	Light Industrial	Snohomish County	Total Land Area: 10 acres Net Rentable Space: 71,325 sf Planned Expansion: 35,000 sf Total Vacant Space: 60,000 sf	y	y	y	y	n	n	n	I-405; SR-527	n	n
16	PACIFIC STORAGE & DISTRIBUTION CENTER 14125 35th Ave. N.E. Marysville, WA 98270	Rex Stratton Pacific Storage & Distribution Center 259-9117	Light Industrial	Snohomish County	Total Land Area: 40 acres Net Rentable Space: 220,000 sf Planned Expansion: 85,000 sf Total Vacant Space: none	y	y	y	y	n	n	y	I-5; SR-99	n	n
17	PAINE FIELD BUSINESS PARK W. Casino Rd. & W. Airport Rd. Everett, WA 98204	Paine Field Business Park 745-2394	Light Industrial	City of Everett	Total Land Area: 5.5 acres Net Rentable Space: 79,000 sf Planned Expansion: none Total Vacant Space: *	y	y	y	y	n	n	y	SR-527	n	n
18	PAINE FIELD INDUSTRIAL CENTER 75th St. S.W. & 16th St. W. Everett, WA 98204	Joe Shephard O'Donnell, Brigham & Partners NW 643-1776	Office/High Tech/Industrial	City of Everett	Total Land Area: 40 acres Net Rentable Space: 25,000 sf Planned Expansion: none Total Vacant Space: whs/ofc: 108,172 sf	y	y	y	y	n	n	y	I-5	n	n
19	QUADRANT BUSINESS PARK 8821 44th Ave. W. Mukilteo, WA 98275	Sherri Nienhuis Quadrant Corp. 355-9048	Light Industrial	City of Mukilteo	Total Land Area: 20 acres Net Rentable Space: 106,000 sf Planned Expansion: build-to-suit Total Vacant Space: whs/ofc: 40,683 sf	y	y	y	y	n	n	y	I-5; SR-526	n	n
20	SNOHOMISH COUNTY AIRPORT Everett, WA 98204	Donald Bakken Snohomish County 353-2110	Light Industrial	Snohomish County	Total Land Area: 1,300 acres Net Rentable Space: 26,142,000 sf Planned Expansion: 17,428,000 sf Total Vacant Space: *	y	y	y	y	n	n	y	SR-525; SR-526	n	n

PIERCE COUNTY

21	FIFE CORPORATE BUILDING 4900 Milton Ave. Fife, WA 98424	John Jewett/ Bob VanCleave Kidder, Mathews & Segner, Inc. 762-7050	Light Industrial	City of Fife	Total Land Area: 2.5 acres Net Rentable Space: 39,250 sf Planned Expansion: 150,000 sf Total Vacant Space: 39,500 sf	y	y	y	y	n	n	y	I-5;	y	n
22	FIFE INDUSTRIAL PARK	Ronald Blakeslee/	Light	City of	Total Land Area: 39 acres	y	y	y	y	n	n	y	I-5;	y	n

**PIERCE
COUNTY**

Industrial Park Name / Location

Leasing Agent/
Broker Phone

Zoning
Class

Zoning
Agency

Area

Electricity
Meter

Water

Sewage System

Rail

Waterway

Public Transit

Highway(s)

Preloading
Require-ment

25	LAKWOOD-TACOMA INDUSTRIAL PARK 4700 100th St. S.W. Tacoma, WA 98499	Frank Jacobs Northwest Building Corp. 588-4425	Industrial	Pierce County	Total Land Area: 170 acres Net Rentable Space: 1,280,000 sf Planned Expansion: 1,000,000 sf Total Vacant Space: indust: 150,000; whs: 150,000 sf ofc: 20,000 sf	y	y	y	y	y	n	y	I-5; SR-99; SR-512	n	n
26	MERIDIAN BUSINESS PARK 116th St. E. & Meridian St. Puyallup, WA	Elliott Severson First City Equities 624-9223	General Commercial	Pierce County	Total Land Area: 13.3 acres Net Rentable Space: none Planned Expansion: 200,000 sf Total Vacant Space: *	y	y	y	y	n	n	y	SR-161; SR-512	n	n
27	RAINIER TERRACE INDUSTRIAL PARK SR-161 at 176th St. E. Puyallup, WA	Ronald Blakeslee/ Peter Crolius Coldwell Banker 292-1600	Industrial/ Office/ Commercial	Pierce County	Total Land Area: 451 acres Net Rentable Space: undeveloped Planned Expansion: build-to-suit Total Vacant Space: *	y	n	y	y	n	n	y	SR-161; SR-167; SR-512	n	n
28	SUMNER INDUSTRIAL PARK Tacoma Ave. & Puyallup St. Sumner, WA	Richard R. Mastero G & M Investments 323-5393	Industrial	City of Sumner	Total Land Area: 105 acres Net Rentable Space: undeveloped Planned Expansion: yes, * Total Vacant Space: *	y	y	y	y	y	n	n	SR-167; SR-410; SR-512	*	*
29	TACOMA INDUSTRIAL CENTER W. of S. Tacoma Way & N. of 56th St. Tacoma, WA 98409	D.A. Cowles Burlington Northern 467-3252	Industrial	City of Tacoma	Total Land Area: 170 acres Net Rentable Space: 38 acres Planned Expansion: 132 acres Total Vacant Space: 32 acres	y	y	y	y	y	n	y	I-5	*	*
30	TRANS-PACIFIC INDUSTRIAL PARK 3600 20th Ave. E. Fife, WA 98424	Jack Johnson Trans-Pacific Properties, Inc. 922-9333	Industrial	City of Fife	Total Land Area: 85 acres Net Rentable Space: 1,420,000 sf Planned Expansion: yes, * Total Vacant Space: *	y	y	y	y	y	n	y	I-5	n	n
31	TRANS-PACIFIC INDUSTRIAL PARK — 5 3600 Industry Dr. E. Fife, WA 98424	Jack Johnson Trans-Pacific Properties, Inc. 922-9333	Industrial	City of Fife	Total Land Area: 85 acres Net Rentable Space: 1,400,000 sf Planned Expansion: * Total Vacant Space: 600,000 sf	y	y	y	y	y	n	y	I-5	n	n
32	BAINBRIDGE BUSINESS PARK Day Rd. W. Bainbridge Island, WA 98110	Dick Brandenburg Pentagram 623-8941	Mfg.	Kitsap County	Total Land Area: 4 acres Net Rentable Space: 2.5 acres Planned Expansion: yes, * Total Vacant Space: none	y	y	y	y	n	n	y	SR-305	n	n
33	OLYMPIC VIEW INDUSTRIAL PARK 8850 S.W. State Hwy. 3 Port Orchard, WA 98366	Ken Atterberry Port of Bremerton 674-2671	Industrial	Kitsap County	Total Land Area: 560 acres Net Rentable Space: 150 acres Planned Expansion: * Total Vacant Space: *	y	y	y	y	y	n	y	SR-3; SR-16	n	n

TOP 50 MAJOR EMPLOYERS--CENTRAL PUGET SOUND REGION*

<u>RANK OVERALL</u>	<u># OF EMPLOYEES¹</u>	<u>NAME OF FIRM</u>
1	61,935	The Boeing Company, Seattle
2	55,283	U.S. Government (includes only agencies with over 100)
3	21,500	University of Washington, Seattle
4	14,920	State of Washington
5	10,000	City of Seattle
6	8,898	Pacific Northwest Bell, Seattle
7	8,100	Safeway, Bellevue
8	6,892	Seattle School District #1, Seattle
9	4,588	Weyerhaeuser Company, Federal Way
10	4,588	King County, Seattle
11	4,300	Group Health Cooperative, Seattle
12	4,300	Rainier Bancorporation, Seattle
13	4,042	Nordstrom, Seattle
14	4,000	Burlington Northern, Seattle
15	3,700	General Telephone of the Northwest, Everett
16	3,500	The Bon Marche, Seattle
17	3,500	Frederick & Nelson, Seattle
18	3,500	METRO, Seattle
19	3,400	Swedish Hospital, Seattle
20	2,263	Sisters of Providence, Seattle
21	3,210	Tacoma School District #10, Tacoma
22	3,000	Seafirst Corporation, Seattle
23	2,800	Lockheed Shipbuilding Co., Seattle
24	2,750	PACCAR, Bellevue
25	2,500	AT&T, Kent
26	2,500	Kenworth Truck Co., Kirkland
27	2,500	J.C. Penney, Seattle
28	2,500	SAFECO Corporation, Seattle
29	2,500	Wright-Schuchart-Harbor, Seattle
30	2,200	Alpine Burtco Intl., Redmond
31	2,100	United Airlines, Seattle
32	1,925	Albertson's Inc., Bellevue
33	1,900	Pacific Gamble Robinson, Kirkland
34	1,850	Bellevue Public Schools, Bellevue
35	1,800	John Fluke Manufacturing, Everett
36	1,800	Kent School District #415, Kent
37	1,800	The Seattle Times, Seattle
38	1,800	Tacoma Boatbuilding, Tacoma
39	1,800	Todd Pacific Shipyards, Seattle
40	1,800	University Hospital, Seattle
41	1,775	Lake Washington School District #114, Kirkland
42	1,701	Highline School District #415
43	1,700	Children's Orthopedic Hospital, Seattle
44	1,700	First Interstate Bank of Washington, Seattle
45	1,641	Blue Cross of Washington and Alaska, Seattle
46	1,600	Peoples Bancorporation, Seattle
47	1,501	Sundstrand Data Control, Inc., Redmond
48	1,500	Alaska Airlines, Seattle
49	1,500	Centennial Villas, Inc., Federal Way
50	1,500	Puget Sound Power and Light, Bellevue

*King, Pierce and Snohomish counties.

¹Regional employees only as of 1984.

Source: "1985-86 Directory of Major Employers: Central Puget Sound Region," Greater Seattle Chamber of Commerce, Research Department.

PUGET SOUND AREA'S TOP 25 HIGH-TECH INDUSTRIES

Rank 1984	Rank 1985	Name	Sales/ Revenue (\$ Mil)	Local Employ- ment	Business
1	1	Boeing Computer Services (Bellevue)	\$800 ²	10,000 ¹	Data processing services
4	2	John Fluke (Everett)	208	2,800	Mfg. electronic test and measuring instruments
3	3	Criton Technologies (Bellevue)	200	1,400	Mfg. aerospace, architecture, electronic, defense products
nr	4	Battelle (Seattle)	180	300	Contract research, energy, industrial processes, materials development
5	5	Sundstrand Data Control (Redmond)	129 ³	1,650	Mfg. aerospace instruments and control systems
10	6	Microsoft (Bellevue)	125	800	Computer software
6	7	Nintendo of America (Redmond)	100	70	Mfg. video games
8	8	Rockcor (Redmond)	94	1,300	Mfg. rocket engines, energy systems
7	9	Physio-Control (Redmond)	91	1,140	Mfg. acute cardiac care and medical monitoring systems
9	10	Honeywell Marine (Seattle)	90	1,300	Mfg. marine control systems
11	11	Eldec (Lynnwood)	71	1,254	Mfg. aerospace and electronic instrumentation systems
12	12	Mannesmann Tally (Kent)	66 ³	1,158 ³	Mfg. computer peripherals
17	13	Data I/O (Redmond)	51	592	Mfg. memory programming systems, printed circuit boards
nr	14	AT&T Consumer Products (Kent)	50	250	Mfg., distr. and repair telephone equipment and supplies
14	15	Wang Laboratories (Seattle)	45	105	Distr. computers and word processing equip.
18	16	Teltone (Kirkland)	42	450	Mfg. electronic telecommunications equip.
23	17	Analysts International (Bellevue)	40	12	Software consulting services
20	18	Almac Enterprises (Bellevue)	40	125	Distr. electronic components and systems
19	19	DP Enterprises (Seattle)	37	280	Distr. data processing equip.
16	20	CX Corp. (Seattle)	36	530	Mfg. photo processing equip., photofinishing services
25	21	Fred Hutchinson Cancer Research Center (Seattle)	34	700	Clinical and scientific cancer research
24	22	Quinton Instruments (Seattle)	31	265	Mfg. renal, biopsy, exercise monitoring equip.
22	23	Fidelity NW (Seattle)	30	40	Whls. distr. electronic parts, TV and video products
nr	24	Stusser Electric (Seattle)	30 ⁴	172	Whsle. electric equipment and supplies
21	25	Intermec (Lynnwood)	27	412	Mfg. bar code printers and readers

nr = not ranked in 1984

¹approximate

²Source: 1984 High Technology in Washington State, EDC.

³Source: "Washington's Largest Companies," 1985, VPI.

⁴Source: "Washington's 100 Largest Private Companies," 1985, Puget Sound Business Journal.

SOME GAINS. SOME LOSSES. SOME QUESTION MARKS.

by Joan LaMunyon

Writing about the Puget Sound area's high-tech industry, especially trying to determine the top 25 corporate leaders in the field each year as **Seattle Business** does, can be frustrating — even, in some cases, impossible.

It isn't just deadlines, you understand: it's the corporate runaround that any researcher-reporter is liable to encounter while trying to compile such a list.

True, for those companies that are publicly traded, the task is relatively easy: You read their annual reports, make a few selective phone calls and you have the basic facts, sort of.

It's trying to discover the facts from *privately* held companies, which form a large portion of the area's high-tech industry, that presents the real problems. As such, they don't have to issue annual reports. And when a researcher calls for information about, say, the number of employ-

ees or, even worse, the gross annual sales, they don't have to tell you a thing.

And in several cases, as we discovered, they won't. For instance, significantly absent from this year's survey list is **Advanced Technology Laboratories (ATL)**. Ranked second in 1984, ATL chose not to disclose any specific financial information this year, except to indicate a revenue range of between \$50 million and \$100 million, which in our reckoning would place the company about 10th on our list, but that's just a guess.

Other companies which, based on earlier performances, might have qualified are **Seattle's Norfin Inc.** and **Tacoma's Fairchild Camera**. However, since their management also chose not to disclose current company statistics, they, too, are not included in this year's ranking.

Complicating the search for the region's Top 25 high-tech companies is the fact that a number of local firms are in reality subsidiaries or divisions of parent firms whose corporate headquarters are located elsewhere.

Even if these are publicly held companies, it is not required for them to break out specific geographic areas in their consolidated annual report statements. Such is the case with **IBM**, **Hewlett-Packard**, **Western Electric** (now part of **AT&T**) and **Boeing Electrical Services Division**.

As you'll notice, their names do not appear among the Top 25, even though significant employment levels indicate they should be there. After all, these four companies alone provide employment for more than 3,000 high-tech workers.

To complicate the picture, moreover, there are subsidiaries and divisions which in fact *do* appear in this year's survey.

For instance, **Boeing Computer Services**, ranked number one, started as an in-house computer services group handling internal data processing for the parent company. It was only later that Boeing began to market its considerable high-tech expertise to outside clients. Even now, the \$800 million sales figure you see in the accompanying chart is only an estimate — a conservative estimate, very likely, because it doesn't include *internal* sales.

Other corporate divisions — **Battelle Northwest** (ranked fourth), **Sundstrand Data Control**, **AT&T Consumer Products**, **Honeywell Marine Systems** and **Analysts International** — are included. The latter showed the greatest improvement in ranking, moving from 23rd in 1984 to 17th on the current list.

Interestingly, **Analysts International** of Bellevue has the smallest workforce of all 25 qualifying firms — 12 employees as of this year. Even so, the company's gross revenues represent the second largest increase among our TOP 25 qualifiers, a jump of 50 percent over last year. Dollar for dollar, only Bellevue-based **Microsoft**, with 800 employees, out-performed the little guy. *They* nearly doubled their 1984 revenues.

It's worth noting — and this is an added complication — that there is no single definitive description of, nor industrial classification for, a high-tech company. What is and what is not a "high-tech" firm, in other words, is open to some conjecture!

Nevertheless, despite these reportorial problems, it is still possible to produce a TOP 25 summary which in essence can serve as a viable barometer of where the industry is in 1985 and where it's going in the near future. Beyond that the reader should approach with caution.

Suffice it to say, even the most conservative of forecasts predict the high-tech industry will be one of the fastest-growing segments of the Washington state economy. Although Washington currently trails other high-tech states in the nation (in electronics, for example), it is nevertheless at or near the top of the list of states with general high-tech development. According to a 1983 study, nearly 12 percent of the state's total workforce is employed in high-tech or related industries. The figure is certainly higher now.

This year's TOP 25 includes 15 manufacturers and 10 other companies, mainly services oriented. The manufacturers produce a wide range of sophisticated products: aerospace and marine systems, medical diagnostic and treatment equipment, telecommunications equipment, measuring and control instruments, even video games.

Services, on the other hand, range from data processing and software consulting to energy research and clinical and scientific cancer research. In fact, the growing expanse of goods and services clearly reflects the complex diversity of the region's high-tech industry. It also helps to explain why definitions are hard to come by!

Our TOP 25 companies represent an interesting mixture of legal structures, from giant publicly held corporations on the one hand to small, privately held companies on the other. And, of course, there are those in the process of change.

Rockcor, for instance, recently went through a well-publicized internal power struggle, emerging finally as a wholly owned subsidiary of Connecticut-based **Olin Corporation**. With its new affiliation, it should be interesting to monitor the Redmond-based firm's standing in next year's TOP 25 survey, as compared to its eighth-place ranking this year and last.

Annual sales for these companies also show an appreciable diversity, ranging from a high of \$800 million (**Boeing Computer Services**) to a low of \$27 million (**Lynnwood's Intermec**). Even more diverse are the employment figures, which range from Boeing's 10,000 to **Analysts International's** far more modest 12.

The aggregate totals of our TOP 25 — \$2.65 billion in sales and a workforce of 27,100 — are all the more impressive when you remember that these 25 companies represent only a fraction of the total number of high-tech firms operating in the Puget Sound area.

As for the future, who knows with certainty. Year-by-year fluctuations within the industry and even among our current TOP 25 will occur, of course. There will be scattered examples of growth and, unfortunately, of decline.

On the whole, however, the high-tech industry in the Puget Sound area should grow and flourish if — and this is an important proviso — the state's business climate permits and encourages it.

If not, it's anybody's guess. □

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Population and Labor Force and Employment

1984 Preliminary, 1995 Projected, Washington State

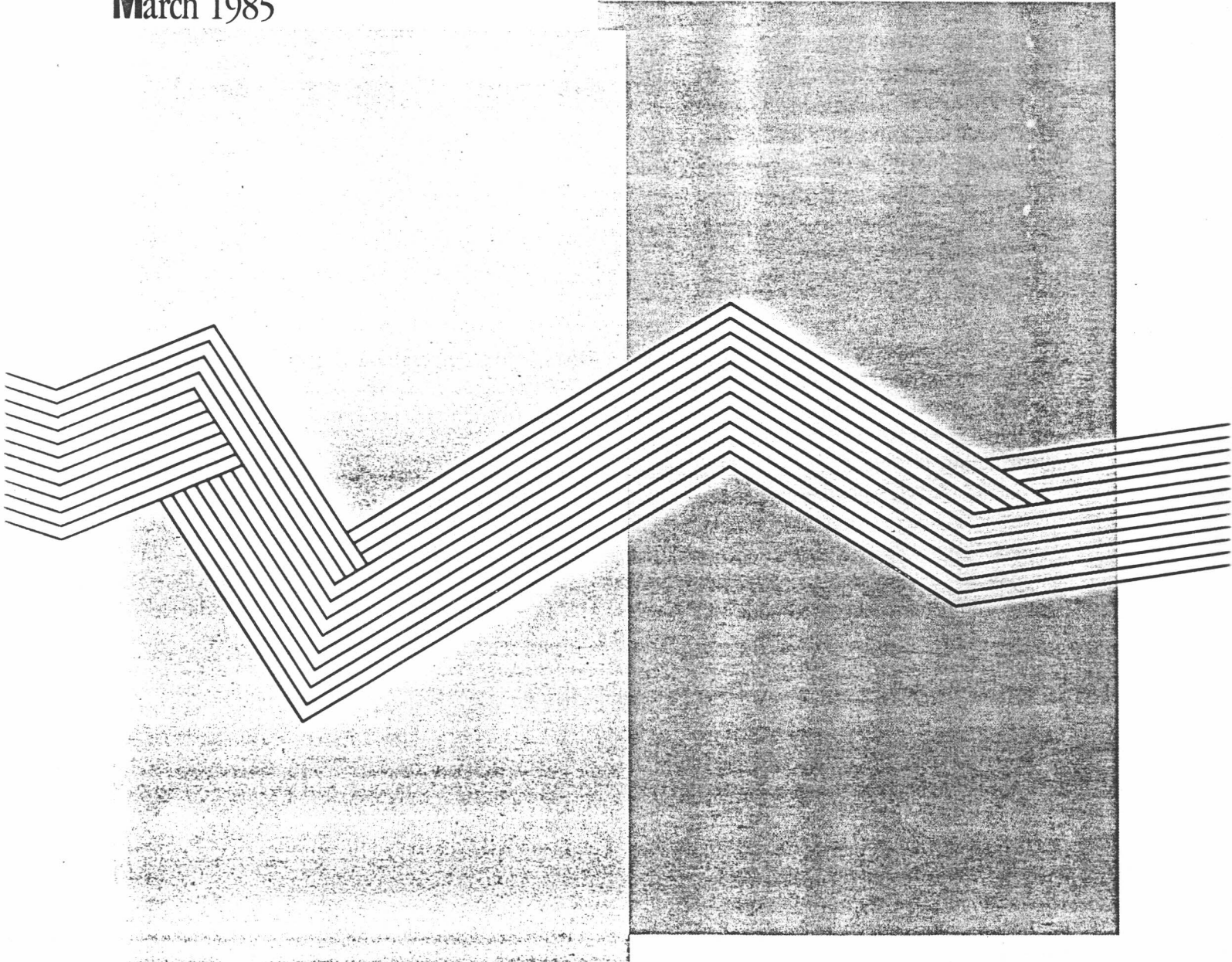
Source: 1984 - Washington State Employment Security Department; 1995 - *Bonneville Power Administration projections, with modifications for lumber and wood products and construction employment

Chart 4

	1984	1995	Change	
			Number	Percent
Population	4,382,100	5,127,107	+799,007	+18.5
Age 15 and Over	3,310,608	3,942,459	+631,851	+19.1
Civilian Labor Force	2,053,000	2,562,600	+509,600	+24.8
Total Employment	1,859,000	2,365,280	+506,280	+27.2
Total Unemployment	194,000	197,320	+3,320	+1.6
Percent of Labor Force	9.4	7.7	xxx	xxx
Nonfarm Wage and Salary				
Employment	1,640,400	2,148,780	+508,380	+30.9
Manufacturing	284,800	317,500	+32,700	+11.1
Lumber & Wood	40,600	42,500	+1,900	+4.7
Transportation Equip.	82,200	91,200	+9,000	+10.9
High Technology*	37,100	48,400	+11,300	+30.5
Construction	76,600	106,700	+30,100	+39.3
Trade	403,100	561,300	+158,200	+39.2
Services & Misc.	352,200	506,880	+154,680	+43.9
Transportation, Comm. & Util.	90,100	103,500	+13,400	+14.9
Fin., Ins., & Real Estate	94,500	134,200	+39,700	+42.0
Government	339,000	418,700	+79,700	+23.5

The State And Nation From 1985 - 1995:

March 1985



A Descriptive Model For Strategic Planning.

Washington State Employment Security

Equal Opportunity Employer

Isiah Turner, *Commissioner*

EDUCATION AND TRAINING

The priorities for education and training in the next decade will include helping young people acquire computer literacy and other skills required for success in the automated workplace; providing remedial education for persons left behind by the electronic revolution; retraining of 15 to 20 million dislocated and topped-out workers; teaching interpersonal and analytical skills required by collaborative work arrangements; providing skills and information necessary for self-employment and facilitating work-study and internship arrangements.

Among these priorities, only work-study and internship arrangements and retraining of dislocated workers are currently addressed by significant, institutionalized programs; and political support for the latter effort is evaporating as the economy recovers. The private sector will step into the void only if return on the investment is clear and substantial.

Powerful demographic and economic forces will shape education and training over the course of the target period. "The new Baby Boom, remedial education of sub-standard entry-level recruits, and the retraining of 15 to 20 million displaced and topped-out workers will all place major new demands upon American education. Research by the National Science Foundation has determined that fully one-half of the costs of automation will be for the training of employees to work with their

new electronic workplace technologies. A secondary focus for education and training may be in the area of providing the necessary skills and information for self-employment and establishing a cottage industry. The education and training in this area will be oriented toward how to establish and operate a small business, in addition to those skills or training necessary to provide a service or produce a product."⁴

Technology Dictates New Goals for Education and Training

"The role of education at all levels, including adult education and retraining, will likely be redefined from the goal of making students functionally literate to making them technologically literate in order to function in society. This redefinition will include two aspects: first teaching those functional skills necessary to understand and interact with the increasingly technical nature of societal life (i.e., survival and functional skills), and second, providing training in those technical skills necessary for most types of employment."⁵

The high priority which state and local government will place on economic development, as well as the private sector's emphasis on productivity, will reinforce the need for education and training aimed at developing a workforce that is both technologically literate and comfortable with the

second industrial revolution. "The availability of quality technical and professional personnel, and the skilled rank-and-file workers, are far and away the most important criteria for the selection of new plant site locations by high-tech industries."⁶

While two-thirds of the nation's households are expected to be active computer users by 1995, the remaining one-third of all Americans, who are already largely noninformation consumers, will fall further and further behind the rest of society as they remain cut off from a powerful, tangible benefits that will be available to those who are computer competent. By the end of the next 10 years, these information-have-nots will begin to exhibit significant disfunctions, including poorer health, higher mortality rates, lower income, etc.

⁴ Ibid. ⁵ Ibid. ⁶ Ibid.

Emphasis on Human Capital and Collaborative Work Relations Also Dictate New Goals for Education and Training

Capital investment alone will not enable the private sector to meet its productivity goals in the next decade. Research into productivity reveals that the workforce, not physical technology, is the principal source of increased economic productivity. One study, from MIT's Sloan School of Management, indicates that, in the U.S., about 70 percent of the measurable improvements in productivity during this century have been due to a continuous process of suggestions and modifications made by workers, supervisors and managers, while less than 30 percent of all productivity improvements have been due to major capital acquisitions. Formally mobilizing employees and their intellectual capital through such collaborative arrangements as worker design programs, quality circles and teamwork, will dominate business' approach to productivity enhancement.

"In order for quality circles and worker design teams to be successful, participating workers must be retrained. Specifically, rank-and-file employees must be equipped with the intellectual skills and tools that will permit them to rigorously measure and evaluate their experience based observations and judgments. Without such structured, quantita-

tive measures, management has insufficient information upon which to take action in response to worker input. The intellectual tools to enable employees to provide managers with such input include: reasoning and logic; cause-effect relationships; relevance trees and flow charting; data gathering, sampling and statistical analysis. Using these skills, on-the-job teams of first line employees are able to provide management with a steady stream of validated findings and recommendations for improving productivity and product quality. Each individual employee's input to this knowledge-generating collaborative effort constitutes a substantial increase in personal productivity, made possible by worker retraining that has built upon and augmented the worker's existing intellectual capital rather than ignoring or discarding it." ⁷

Management and rank and file will also need to be trained in the interpersonal and people skills required to make collaborative workforce arrangements effective.

What form will these educational, training and retraining programs take? How will they be provided? And will we have the resources to meet these needs over the next decade?

⁷ Ibid.

Work-Study Programs and Internships

"Studies conducted by employers and labor force experts consistently show that student involvement in assignments requiring real world applications of classroom knowledge substantially increase the level of educational achievement for both secondary and post-secondary schooling. This factor is generally not reflected in the most common current proposals for improving educational excellence. But, such arrangements - in the form of student internships and cooperative work-study

programs - are rapidly being established throughout the U.S. between employers and public schools, community colleges, vocational-technical training programs and four-year post-secondary institutions at the local level. A 1984 Office of Technology Assessment (OTA) survey found that work-study programs are one of the 22 most common initiatives being adopted by local jurisdictions as a means of encouraging high-tech economic development.

Computer Assisted Instruction

The use of computers is increasingly perceived as a key element of high-tech education. Research into educational productivity, however, indicates that the tangible benefits from computer aided instruction (CAI) have been limited, especially at the secondary and collegiate levels. CAI has proven to be twice as productive in elementary school applications, where computers are particularly effective in facilitating rote learning, for which a considerable body of software has been developed.

"It is reasonable to assume that, given current market penetration rates, the vast majority of all

teachers and school administrators will have their own computers within less than 10 years. As a growing share of the total population acquire their own computers, they will incidentally be equipping themselves with access to several alternatives to traditional sources of education. (Within less than five years, the sales of educational software is projected to exceed all text book sales, and three-fourths of that software is expected to be purchased by households, while only one-fourth will be purchased by educational institutions.)" ⁸

⁸ Ibid.

In addition to work-study and internships, educators and employers will focus on methods of training (and retraining) that have met with clear success. In-house retraining of displaced employees to fill jobs with the same employer will be stressed. The emphasis will also be on voluntary retraining and on extremely close cooperation between employers and educators in development of programs and curricula. Linkage of specific programs to specific labor market needs will be the theme and organizing principle of education and training during the target era.

These approaches to retraining and placement are consistent with proposals to reform the current unemployment insurance system to include, as a central component, Individual Training Accounts supported by contributions from both employer and worker. The underlying philosophy of such a system is that the unemployment insurance dollar is spent most efficiently when it supports retraining and effective work search leading to placement.

Factors Influencing Effectiveness of Worker Retraining

Research in vocational education shows that in-house retraining of displaced employees to fill other jobs with the same employer is far-and-away the most effective and cost-efficient human resource recycling process. It is superior to all other recycling processes that require displaced workers to change both employers and career fields for two reasons. In the first place, in-house programs are consistently most accurate in targeting retraining workers for specific available jobs. In the second place, in-house career shifts permit workers to build upon their previous experience based work-

place knowledge, in spite of a change in career fields. This knowledge sustains the retraining employee's productivity in his or her new job, and further sustains his or her long-term earning capacity. This latter factor is particularly important for workers who must change careers after ten years on the job. Labor market statistics show that employees who shift career fields and employers after ten years in a prior field are likely to experience a significant reduction in their lifetime earning potential.

"A second key factor influencing the effective-

ness of worker retraining is revealed by research on the management of innovation and change. These studies show that voluntary programs are consistently much more successful and more cost-effective than mandatory or circumstantial programs. This applies to all employee development and retraining programs. Many major employers in both the public and private sectors have long been aware of the singular importance of voluntary commitment to the success of any effort aimed at changing employee behavior or performance, and have routinely used this criterion in the design of their human resource development policies and programs. At the same time, the voluntary factor is often completely overlooked in the development of employee training plans, and is seldom, if ever, used in evaluating public policy options. In light of the extremely poor track record of non-voluntary employee change programs, the criteria for assessing alternative worker retraining policies and programs will include the degree to which various individual options are likely to elicit voluntary commitments on the part of displaced, or soon to be displaced workers.

⁹ Ibid.

“To the extent that employer-members of PICs and other consortia are able to accurately forecast their collective future personnel needs and effectively translate these needs into specific curricula offerings, such local collaborations reflect one of the key advantages of in-house retraining - i.e., the accurate linkage of specific training programs to specific labor market needs. Historically, retraining programs without such direct linkages to employers have been relatively poor at correctly reflecting actual labor market demands, in part because such programs have also been responsive, to one degree or another, to the desires and expectations of the retrainees. These desires - social and economic utilities - logically lead individuals to pursue retraining in fields that offer them high wages and/or high status, or in fields that are only incrementally different from their previous work. Such decisions criteria unavoidably lead to mismatches between the mix of retrained workers and actual labor market demands, and reflect a waste of both capital and human resources invested in the acquisition of unneeded skills.”⁹

With competition so fierce for the limited capital that will be available through the remainder of the decade, both private and public dollars available for education, training and retraining, will be scarce. Therefore, all proposals for educational reform and industrial retraining will be rigorously assessed in terms of their proven cost-effectiveness.

As a consequence, it will be increasingly vital to fully involve business in the creation and implementation of publicly funded education and training programs. Rigorous, ongoing evaluations, measuring both net impact and gross outcomes, will need to be part of any major, publicly funded education and training program in order to justify continued or increased budgetary support.

Insufficient Resources for Critical Education and Training Requirements

A number of economic projections indicate that a worldwide capital shortage will sustain double-digit interest rates beyond the year 2000. While the compelling necessity to upgrade our productive

human resources will clearly elicit significant increases in both public and private sector funding for education and training during the coming decade, there will also be equally compelling

demands upon the limited supplies of discretionary capital for equally essential national purposes, such as productivity improvement, infrastructure replacement, high-tech R&D and new business ventures. Thus, it cannot be casually assumed that the imperative of educational excellence and worker retraining are so great that there will be programs that could - or should - be instituted in pursuit of these two goals. In fact, current projections indicate that, absent unprecedented increases in national productivity, there are likely to be insufficient resources available to meet all of the crit-

ical educational requirements of the next 10 years.

“ This basic reality would strongly suggest that all proposals for both post-industrial educational reform and for trans-industrial retraining should be rigorously assessed in terms of their proven cost-effectiveness, in order to assure the adoption of the most productive initiatives. This fundamental criterion is equally applicable to the employee training activities of individual organizations, the commitments and investments of local school systems, state educational policies and federal retraining programs.”¹⁰

¹⁰ Ibid.

COUNTY LEADERS' IDEAS ABOUT PROJECTS/RESOURCES THAT TESC
MIGHT PROVIDE TO PEOPLE LIVING IN SOUTHWEST WASHINGTON AND
KING COUNTY

Connections between faculty and programs at TESC
and high schools and community colleges

Construction of a Longhouse at TESC

Four-year and advanced degree programs available for
current and prospective employees of business and state
government; Engineering, Computer Science and Management
Training given as examples.

Continuing commitment of TESC to hiring minorities and
women and strengthening of programs for these groups

TESC's unique approach to education needs to be
communicated more effectively in personal contacts and
publications.

Courses at TESC in economics, world cultures, art,
international relations (especially as related to developing
expertise to establish trade with Pacific Rim countries) are
needed.

TESC's ability to produce graduates who have a background
in the arts and sciences, who know how to think clearly
and independently, and who are self-motivated

TESC interns to work in local government, on planning
issues and with the elderly and handicapped

TESC's continual support of community's ties with Japan,
of teacher exchange program with the University of Kobe, and
of academic courses about Japanese culture (Workshops on
Japanese culture for local government officials and business
people are needed.)

TESC's off-campus school in Tacoma as it serves minority
and military populations is helping to meet special needs
of Pierce County

Clarification of TESC's role on the Vancouver Campus

TESC's ability to meet changing demands for educational
services

Businesses need employees who have a subject specialty,
who have problem solving abilities and communication skills,
who have interpersonal skills and networking abilities, and
who are flexible and can adapt easily to change. Boeing and
Weyerhaeuser given as employers.

Employees need to be able to use a personal computer.

Higher education must address the needs of all its
special populations, especially retraining needs of
unemployed workers formerly in resource-based industries
and needs of adults to grow as educated, responsible and
active members of their community and their culture.

Planning for higher education must combine a
humanistic orientation with a practical sense of what is
possible. Planners must view each institution as playing
its unique and complementary part in the whole picture of
an integrated and comprehensive educational policy for the

state.

Longview Fibre might need consultant help in conducting management, leadership and counseling training.

TESC might serve stated needs for teacher education and mid-level management continued education in Cowlitz and Mason counties.

Training workshops on marketing and tourist trade are needed for people in business and government.

In Cowlitz County, there was a suggestion that TESC was not needed as a resource to train professionals since there was an overabundance of same in this county. It was also suggested that higher educational institutions, in general, need to be more aware of the job market so that an oversupply of graduates in certain fields such as forestry can be avoided.

TESC as a near-by resource for education for cultural enrichment, advanced degrees, and specifically, teacher education, aquaculture, and environmental protection for people in Mason County. Courses needed by teachers are: math, science, child abuse issues and teaching strategies.

TESC, in conjunction with the Shelton School District and local governmental jurisdictions, to purchase ITT Rayonier Marine Lab on Hood Canal for site of proposed Southwest Washington Marine Research and Training Center for high school and college students

Olympic College's Shelton Extension and SPSCC as providers of retraining for unemployed timber workers. TESC's role for people needing additional vocational skills for immediate job potential seen as minimal in Mason County.

TESC named as possible provider of upper division courses for residents of Wahkiakum County; classes could be given at Longview. Courses suggested were business development, marketing, teachers training, information services and counseling.

A Labor Education and Research Center established at TESC. The Center would sponsor conferences and offer courses such as leadership training, occupational health and safety, collective bargaining, labor history, and media communications. SEIU AFL-CIO, CLC support TESC as a location. TESC faculty member, Dan Leahy, is currently working on a proposal for the establishment of this program.

Courses like "Law and Society" taught at WSU would give citizens needed education on the judicial system.

College and universities need to show evidence of social commitment and intellectual leadership in the communities that they serve. Businesses "adopt a school" or support "incubators" through the Private Industry Council. Perhaps educational institutions could "adopt a community" or set up "knowledge incubators".

Educational level of work force must remain high if an area is to be able to attract new businesses. TESC seen as potential provider of junior and senior level courses in personnel management, accounting, finance, business management and economics to help Lewis County

people get background essential to sound business practices. More information about TESC is needed.

TESC was suggested as provider of policy research for state government. Data for long range planning is needed. Conferences that would include governmental leaders could be sponsored by TESC. Joint relationships between governmental agencies and TESC could be encouraged.

More information on TESC's mission and curriculum needed by citizens in Pierce County, particularly those living in outlying areas; however, no particular enrollment potential was predicted.

Four-year institution is needed by high school graduates and by older place-bound population in Clallum County. Student interests in four-year degrees is job oriented in areas of business administration and health and social services.

Grays Harbor County needs access to a four-year college. Areas in which expertise is needed are: economic development, the implications of a changing economy, international trade, culture and economics of the Pacific Rim countries, entrepreneurship training.

Jefferson County lacks access to higher education; Peninsula College has limited offerings.

Kitsap County lacks access to higher education. Workforce tends to be highly skilled and wants education for career advancement purposes.

Skamania County people need exposure to diversity and expertise that access to a four-year college could provide. People need assistance in determining how to utilize remaining timber resources, revitalize the economy and at the same time retain the flavor of the community.