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**annual report
on state and area
occupational
requirements
for vocational
education**



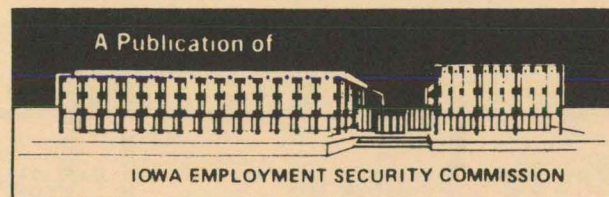
**Iowa Employment Security Commission
Council Bluffs, Iowa fiscal year 1977**

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Annual Report on State and Area
Occupational Requirements for
Vocational Education

Fiscal Year 1977

Iowa Employment Security Commission
State Employment Service
710 First Avenue
Council Bluffs, Iowa

Developed By
Iowa Employment Security Commission

PREFACE

This report is submitted in accordance with Section 123 (a) (8) of the Vocational Education Amendments of 1968 and represents findings with respect to the statewide needs for vocational education in Pottawattamie County, Iowa.

It provides vocational education planners with essential information regarding future demand and supply for specific occupations. Such information should enable the planners to better adapt vocational education programs to meet anticipated labor demand.

Separate reports are available for Iowa and major labor areas within the state.

ANNUAL REPORT ON STATE AND AREA OCCUPATIONAL REQUIREMENTS
FOR VOCATIONAL EDUCATION
COUNCIL BLUFFS, IOWA

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ANNUAL REPORT ON STATE AND AREA OCCUPATIONAL REQUIREMENTS
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I. BACKGROUND INFORMATION

A. Area Coverage and Description

The Council Bluffs Labor area is defined as Pottawattamie County and is located on the western border of the state adjacent to Omaha, Nebraska. Approximately 69 percent (61,238) of the county's 89,241 inhabitants reside in the city of Council Bluffs (1970 Census projected to 1973).

The Council Bluffs Employment Office also serves two surrounding rural counties: Harrison and Mills. These counties had a combined population estimated at 29,417 in 1973.

B. Recent Employment and Unemployment Trends

Table 1 provides recent industrial employment of Pottawattamie County. Nonagricultural wage and salary workers include all workers who were employed in the county except agricultural, domestic, self-employed, and unpaid family workers. Employment in the manufacturing industry dropped 33% from 1973 to 1975. This was caused, primarily, by heavy layoffs in the meat packing industry. Employment in the nonmanufacturing industries has remained generally stable. Because of declines in manufacturing, nonmanufacturing now accounts for nearly 87% of the work force compared with 81% in 1973.

TABLE 1

	1973		1974		1975	
	Ann.	%	Ann.	&	9 mo.	%
	Avg.		Avg.		Avg.	
Nonagricultural wage and salary workers (Except domestics) <u>2/</u>	22900	100.0	23200	100.0	21900	100.0
Manufacturing	4300	18.8	4200	18.1	2900	13.2
Durable goods	1800	7.9	1800	7.8	1600	7.3
Nondurable goods	2500	10.9	2400	10.3	1300	5.9
Nonmanufacturing	18600	81.2	19000	81.9	19000	86.8
Construction	1000	4.4	1200	5.2	1200	5.5
Transp., Comm. & Public Utilities	3000	13.1	2900	12.5	2900	13.2
Transportation	2400	10.5	2300	9.9	2300	10.5
Comm & Public Util	600	2.6	600	2.6	600	2.7
Wholesale & Retail trade	5500	24.0	5800	25.0	5700	26.0
Wholesale trade	1000	4.4	1000	4.3	1000	4.6
Retail trade	4500	19.7	4800	20.7	4700	21.5
Finance, Ins & Real Estate	900	3.9	900	3.9	900	4.1
Services & mining	4100	17.9	4100	17.7	4300	19.6
Government	4100	17.9	4000	17.2	4000	18.3
Persons involved in labor-management disputes <u>3/</u>	0		100		0	

1/ Place of Work Concept: Method by which an employed individual is counted in the area where he works regardless of the area where he lives.

2/ Detail may not add to totals due to rounding. Figures based on a March, 1974, benchmark.

3/ Annual averages were insignificant for 1973 and 1975.

The graph below shows nonagricultural wage and salary employment, by industry, from January, 1970, through September, 1975. Employment trends in each major industry may be summarized as follows:

Finance, Insurance and Real Estate: Has been showing slow but stable growth since 1970.

Construction: Has surprising strength. Holding its own compared to strong 1973 and 1974 levels.

Transportation, Communication and Public Utilities: Currently stable, but has weakened since 1973.

Government: Has been very stable since 1971.

Service and Mining: Has exhibited erratic but growing strength since 1970.

Manufacturing: Grew rapidly through 1973, weakened, then fell drastically. Presently, is slowly picking up.

Wholesale and Retail Trade: Exhibited strength through 1974, then weakened.

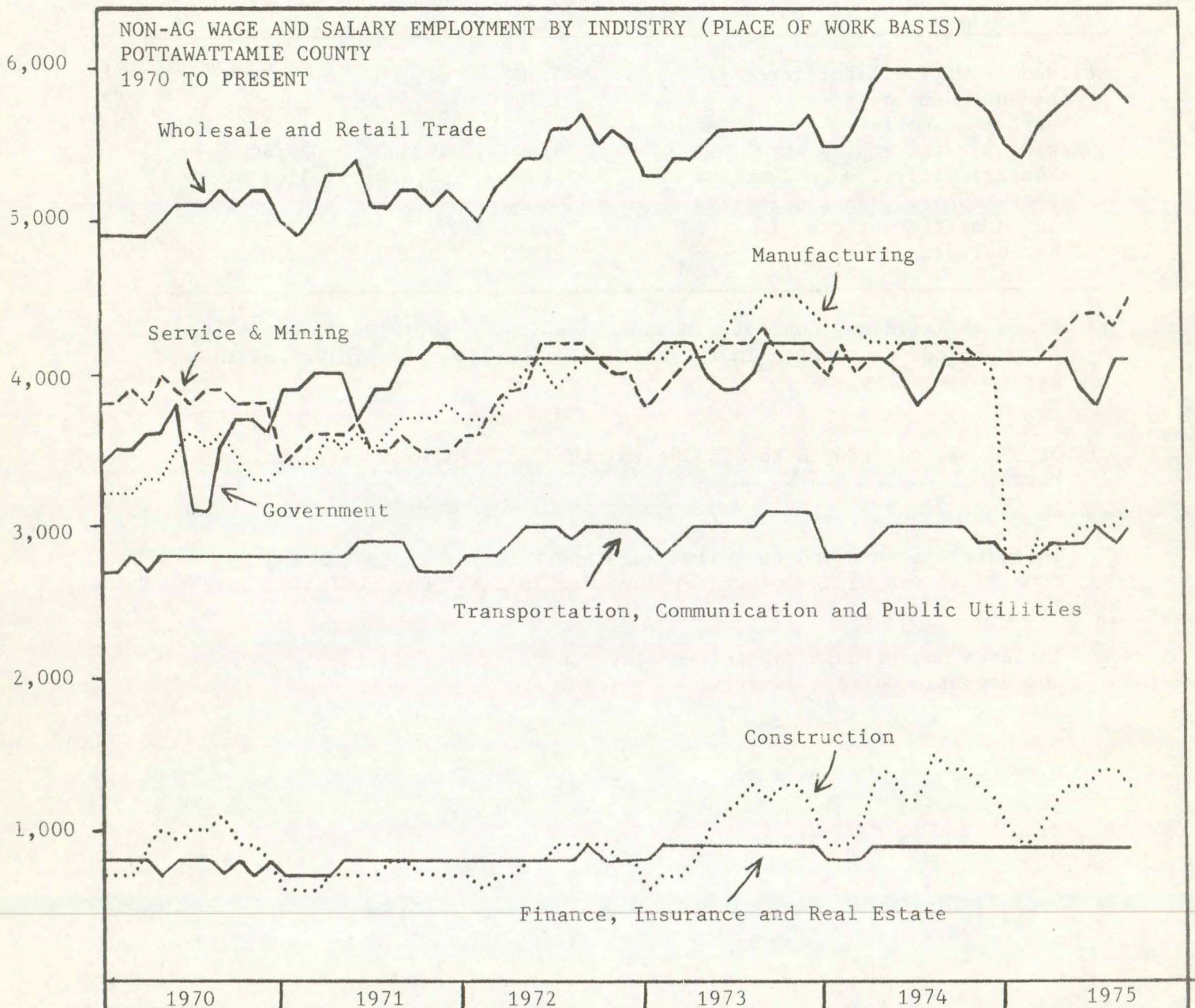


Table 2 provides recent data on the labor force, employment, and unemployment in Pottawattamie County. The labor market has changed significantly since 1973. Average total employment in 1975 is down 1800 persons from what it was in 1973. On the average there have been 3200 persons unemployed in 1975, compared with only 1200 persons in 1973. These developments are reflected in the average unemployment rate: from 2.9% in 1973 to 7.9% in 1975.

TABLE 2

Council Bluffs (Pottawattamie County) Labor Force Employment and Unemployment Data by Place of Residence 1/

	1973 Annual Average	1974 Annual Average	1975 Annual Average
Resident civilian labor force <u>2/</u>	40,400	41,100	40,700
Resident unemployed	1,200	1,500	3,200
Percent unemployed	2.9	3.8	7.9
Resident total employment	39,200	39,500	37,400
Nonagricultural wage & salary <u>3/</u>	32,800	33,400	31,300
Self-employed, unpaid family, and domestic workers <u>4/</u>	3,500	3,500	3,300
Agriculture	2,900	2,700	2,800

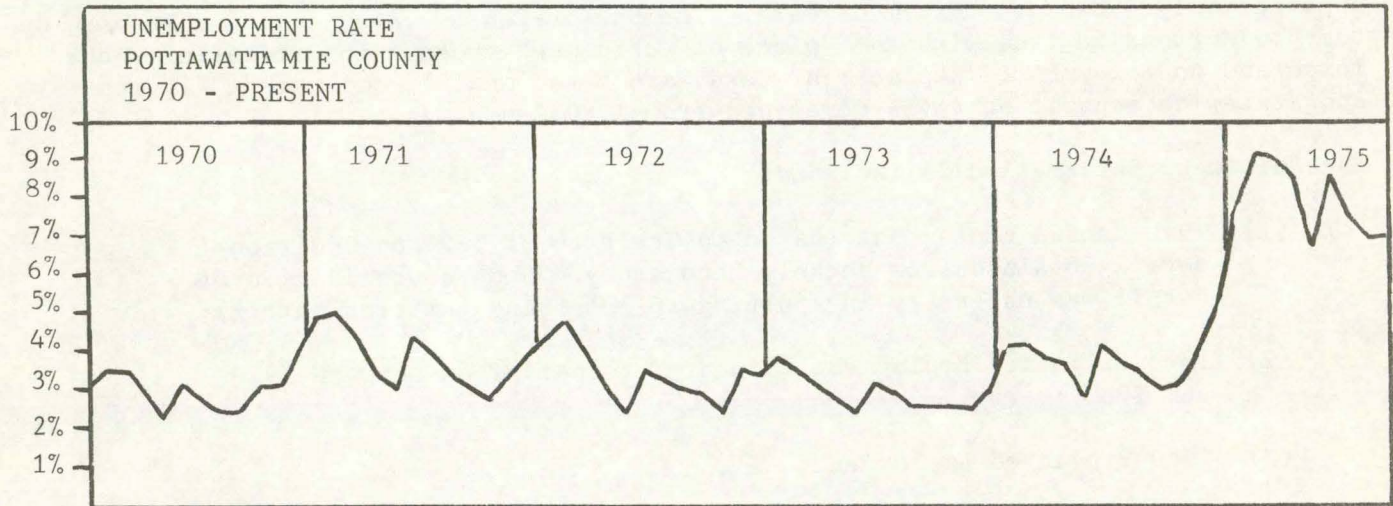
1/ Place of Residence Concept: Method by which an individual, unemployed or employed, is counted in the area where he lives regardless of the area where he works.

2/ Detail may not add to totals due to rounding. Figures based on a March, 1974, benchmark.

3/ Includes all full and part-time wage and salary workers (excluding domestics) who were employed or involved in labor-management disputes.

4/ Includes nonagricultural self-employed persons, unpaid family workers, and domestic workers in private households.

The graph below shows unemployment rate fluctuations during this decade for Pottawattamie County. The rate was fairly stable until late 1974 when severe employment cutbacks caused the jobless rate to soar.



II. Analysis of Statistical Information

A. Labor Demand: Overall Projections

1. Occupational Projections Methodology

Occupational projections are developed by the Research and Statistics Dept. following the basic methodology in Volume I of Tomorrow's Manpower Needs. Industrial employment is projected to 1980 by regression analysis, based on annual average wage and salary workforce employment by industry. These projections are converted to occupational employment by applying the national staffing patterns matrix in Volume IV of Tomorrow's Manpower Needs. A change factor for the 10 year period 1970 to 1980 is obtained for each occupation and applied to 1970 Census employment data. The use of Census data as a base keeps the projections in line with the "place of residence" concept in estimating labor force and unemployment. Replacement needs are based on 1975 employment figures and statewide separation rates developed from 1970 Census data.

The following information is included:

- (1) 1970 Census Employment (based on Table 86 or 122 and additional detail obtained from Berkely Laboratory. Some consolidation of detail was necessary in applying the staffing patterns matrix);
- (2) 1975 Estimated Employment (linear interpolation between 1970 and 1980);
- (3) 1980 Projected Employment;
- (4) Percent change between 1975 and 1980;
- (5) Expansion Needs between 1975 and 1980 (the numerical difference between 1975 and 1980 employment levels);
- (6) Replacement Needs between 1975 and 1980 (the number of workers needed to replace present workers who die, retire, or otherwise leave the labor force);
- (7) Total Needs 1975 to 1980 (the sum of Expansion and Replacement Needs).

Expansion needs represent an increase or decrease in employment due to projected industrial growth or contraction. These projections represent needs anticipated from the extension of past trends, rather than actual employment predictions.

Replacement needs represent jobs already present in the economy and accounted for in the employment levels. These jobs do not represent a change in the level of employment, but rather, a need for additional workers skilled in the specific occupation.

Total needs, therefore, are the sum of needs due to growth or contraction and needs due to separations from presently-held positions.

Employment figures include nonagricultural wage and salary employment adjusted for unpaid absences and multiple job holders, self-employed, and unpaid family workers, government workers and persons involved in labor-management disputes.

2. Projections (One year to five year)

a. Overall trends

The following table compares the major occupational groups found on Table 3 in terms of future total labor needs:

<u>Occupational Groups</u>	<u>Total Projected Needs*</u>		
	<u>1 Year</u>	<u>5 Year</u>	<u>%</u>
Clerical and Sales	542	2711	32.0
Service	384	1914	22.6
Prof, Tech, & Managerial	251	1260	14.8
Miscellaneous	242	1209	14.3
Structural Work	91	447	5.3
Machine Trades	84	424	5.0
Bench Work	51	256	3.0
Agriculture	44	220	2.6
<u>Processing</u>	<u>6</u>	<u>34</u>	<u>0.4</u>
Total	1695	8475	100.0

* These needs are subtotals of Only those specific occupations included on Table 3. "Other" or "not elsewhere classified" occupational groups were not included.

Council Bluffs closely follows projected State and National employment trends. Clerical and sales and service occupations account for the greatest total needs. These two groups employ the most workers and have the highest labor turnover of any of the occupational groups. Professional, technical, and managerial occupations as well as miscellaneous occupations are likewise expected to have considerable future needs. Other groups will have significantly less total demand.

0-1 Professional, Technical and Managerial

Registered nurses are projected to have the greatest number of total needs during the next few years. The second highest demand will be for accountants. There will also be substantial need for medical and dental technicians and elementary teachers. The need for elementary teachers, however, will be entirely due to replacement.

2 Clerical and Sales

The greatest demand in this group will be for secretaries. Retail sales clerks and bookkeepers and billing clerks will have the next highest demands in the next few years. Substantial numbers of additional typists and bank tellers and cashiers will likewise be needed. Replacement needs due to high turnover will be responsible for most of the demand for workers in all of these occupations.

3 Service

The greatest need for additional workers in this group will be for waiters, waitresses, food counter and fountain workers, and hospital attendants. The second largest demand will be for janitors. There will also be considerable need for cooks, except private and practical nurses. Again, most of the demand in these service occupational groups will arise from replacement due to high turnover.

4 Agriculture

There will be a net reduction in the total number of agricultural workers employed by 1980. Some additional workers will be needed, however, to fill the demand due to replacement needs.

5 Processing

Bakers are the only occupational group included in processing. They are expected to have moderate demand over the next five years.

6 Machine Trades

Greatest demand in this group will be for auto mechanics and auto body repairmen. Total needs for manufacturing inspectors are also expected to be moderately high over the next five years. Demand for additional labor in the remaining occupations will be significantly less.

7 Bench Work

In this group, total needs will be highest for sewers and stitchers. Second highest demand will be for assemblers. Most of the demand for both occupations will be due to replacement.

8 Structural Work

Carpenters will have the largest total needs. Welders and flamecutters and electricians will also have substantial demand. Other occupations will need significantly less workers.

9 Miscellaneous

Truck drivers and deliverymen are expected to have the greatest number of total needs. Demand will be second highest for foremen. Other occupations that will have significant needs are packers and wrappers (except produce) and freight, stock and material handlers.

3. Limitations of Data

DOT and Vocational Education Codes were assigned to the Census occupational titles on Table 3. These titles may not always match directly with comparable titles assigned to the codes. Census titles are more inclusive of various occupations than DOT and Vocational Education titles.

Projected needs (both expansion and replacement) should not be regarded as absolute. They should be viewed as indicators of trends in occupational growth and of relative growth among the occupations. Expansion (or contraction) of specific occupations was based upon the extension of past trends. These trends are projected forward with the assumption that economic conditions will remain similar to what they have been in recent years. Replacement is based directly upon expansion. Unforeseen future events could possibly alter the reliability of these occupational projections, both expansion and replacement.

Tables 1, 2, and 3 are not directly comparable with one another. Table 1 is based upon data which has been gathered using a "place of work concept". This methodology counts employed individuals in the area where they work regardless of the area where they live. Table 2 is based upon data which has been gathered using a "place of residence concept". This method counts individuals, employed or unemployed, in the area where they live regardless of the area where they work. Table 3 is based upon a "place of residence concept" but excludes "other" or "not elsewhere classified" occupational groups and, therefore, is not inclusive of all possible data.

These groups were excluded because they have limited meaning for vocational education planners. Since the table found under Section II-A is based upon Table 3 it also does not include "other" or "not elsewhere classified" occupational groups.

The manpower needs portion of Table 3 provides data concerning occupational demand for Pottawattamie County only. The last column on that table (Employment Service Applicants), however, provides occupational supply data for Pottawattamie County and for two adjacent rural counties, the entire administrative area served by the Council Bluffs Employment Office. This difference occurs because a majority of demand for most occupations in the three county area will be found in Pottawattamie County, while a majority of supply for most occupations to fill this demand will come from the entire three county area. Although not entirely comparable, occupational demand and supply match well enough to yield significant findings.

B. Labor Supply Summary

1. Employment Service Applicants

The currently available labor supply for selected occupations shown in Table 3 was obtained from a tally by occupational code of active applicants (according to the Employment Service Automated Reporting System, ESARS) as of September 30, 1975.

Based on that tally the major occupational groups rank in the following order with respect to the supply of available workers.

<u>Occupational Group</u>	<u>Active E.S. Applicants as of 9/30/75</u>	<u>%</u>
Miscellaneous	456	21.5
Clerical & Sales	427	20.1
Service	338	15.9
Structural Work	263	12.4
Prof., Tech., Managerial	231	10.9
Machine Trades	162	7.6
Processing	122	5.7
Bench Work	86	4.1
<u>Agriculture</u>	<u>38</u>	<u>1.8</u>
TOTAL	2123	100.0

0-1 Professional, Technical, Managerial

Manager trainees are in greatest supply among these occupations. Professional, technical, and managerial occupations account for 10.9% of all the active applicants.

2 Clerical and Sales

About 20.1% of total applicants are clerical and sales related. General office clerks, clerk typists, secretaries, cashiers, and receptionists are in greatest supply. High labor turnover and many first time job applicants cause relatively high supply for many occupations found within this group.

3 Service

The third largest supply of E.S. job applicants is found in the service occupational group. This group includes about 15.9% of all applicants. Supplies of workers will be especially high for two groups: (1) waiters and waitresses and (2) nurse aids and orderlies. Maids (II) and charwomen are also expected to be in considerable supply. Again high turnover and many initial job applicants will help provide abundant supplies in many occupations in this group.

4 Agriculture

The smallest supply of available workers is found among agricultural occupations with a 1.8% of all applicants.

5 Processing

Processing occupations account for 5.7% of total supply. Meat packing workers show the greatest supply in this group.

6 Machine Trades

Machine trades include 7.6% of available workers. The supplies of applicants are greatest for machinists, auto service mechanics, and auto mechanics.

7 Bench Work

This group also comprises 4.1% of total applicants. Production assemblers are in greatest supply in this group.

8 Structural Work

This is the fourth largest group accounting for 12.4% of the available supply of workers. Supply is largest for construction workers and welders.

9 Miscellaneous

In this group supply is by far greatest for store laborers. Other occupations with significant supply include material handlers and tractor-trailer truck drivers. Miscellaneous occupations account for 27.5% (the largest of all the occupational groups) of the total supply found in the active file of applicants.

2. Training Output

Data regarding vocational education programs was not available for Pottawattamie County. There were also no ongoing MDTA training programs in the area.

3. Limitations of Data

Currently available labor supply data was obtained from a listing of occupational codes, not titles. Titles were chosen to be most representative of the codes, but may differ from the titles originally assigned each applicant.

It should also be noted that the ESARS active file does not represent the same number of people that are included in unemployment estimates. The active file will contain persons who are already employed and seeking other jobs, those who have moved or otherwise withdrawn from the labor force, and persons who are enrolled in training courses. Also, a number of persons in the E.S. active file may already have found jobs on their own. Most applicants are kept in the active file for 60 days. However, some applicants, such as claimants, disadvantaged, minorities and veterans remain in the file longer, thus inflating current supply.

Furthermore, Employment Service applicants will not be inclusive of all possible labor supply. Some people will be looking for work and will not be registered with the local employment service. These individuals may contact private employment agencies or seek employment on their own. Also, the supply data in this report also includes very limited information concerning training supply possibilities.

Comparison by DOT between demand and supply data is limited due to the differences in definitions and grouping of occupations.

III. FINDINGS AND INTERPRETATIONS

Following is a list of occupations judged to have an oversupply of applicants, and a list of occupations judged to have an undersupply of applicants. Determinations were based on 1) labor demand and supply data presented in Table 3, and 2) placement trends at the Council Bluffs Employment Office.

<u>OCCUPATIONAL GROUP</u>	<u>OVERSUPPLY</u>	<u>UNDERSUPPLY</u>
0,1 Professional, Technical, and Managerial	Secondary Teachers Elementary Teachers Public Administrators Recreation and Social Workers	Computer Specialists Registered Nurses Restaurant, Cafe, Bar Managers
2 Clerical and Sales		Secretaries Stenographers Typists Bookkeepers and Billing Clerks Key Punch Operators Bookkeeping and Billing Machine Operators Salesmen, Services and Construction Insurance Agents, Brokers and Underwriters Real Estate Agents and Brokers
3 Service	Meat Cutters	Private Household Workers Busboys and Dishwashers Waiters and Waitresses Food Counter and Fountain Workers Cooks, Except Private Practical Nurses Guards and Watchmen
6 Machine Trades	Machinists and Job Die Setters Tool & Die Makers Precision Machine Operators Pressmen and Platemakers	Auto Body Repairmen Cabinetmakers
7 Bench Work	Radio & TV Repairmen	Upholsterers and Tailors Dressmakers and Seamstresses Except Factory Sewers and Stitchers

8
Structural Work

Electricians
Construction
Laborers

Carpenters

9
Miscellaneous

Truck Drivers &
Deliverymen
Garage Workers and
Gas Station
Attendants

Taxicab Drivers &
Chauffeurs
Stationary Engineers
Compositors

IV. APPENDIX

FUTURE DEMAND AND PRESENT

SUPPLY BY OCCUPATION

TABLE 3: FUTURE DEMAND AND PRESENT SUPPLY BY OCCUPATION

DOT Code	DOT Title	Vocational Ed Code	1976 Empl	ONE YEAR NEEDS			FIVE YEAR NEEDS			ES Apps
				Expan- sion	Replace- ment	Total	Expan- sion	Replace- ment	Total	
0, 1	Professional, Technical, and Managerial					251			1260	
002.081	Aero-Astronautic Eng.	16.0101	0	0	0	0	0	0	0	0
003.081	Electrical Engr	52.00	35	0	0	0	2	2	4	0
003.181	Electrical Tech	16.0107	22	1	0	1	4	1	5	2
005.081	Civil Engineer	52.00	85	2	2	4	11	8	19	3
007.081	Mechanical Engr	52.00	12	0	0	0	1	1	2	1
007.281	Draftsman	17.13	117	3	1	4	17	7	24	1
018.188	Surveyor	16.0106								
020.188	Computer Specialist	14.02	114	7	2	9	33	11	44	6
070, 071	Physician, MD & Osteo	39.00	100	4	3	7	18	17	35	0
072.108	Dentist	39.00	36	1	1	2	5	7	12	0
074.181	Pharmacist	52.00	70	2	3	5	9	14	23	0
075.378	Registered Nurse	07.0301	539	18	31	49	92	157	249	17
077.168	Dietitian	39.00	0	0	0	0	0	0	0	1
079.368	Therapist	07.0903	16	0	1	1	0	4	4	6
078, 079	Med & Dental Tech	07.0203	256	14	14	28	70	70	140	39
090.118	School Administrator	51.00	101	2	3	5	10	15	25	0
090.228	College Teacher	51.00	97	1	3	4	5	14	19	1
091.228	Secondary Teacher	51.00	394	-3	14	11	-15	72	57	1
092.228	Elementary Teacher	51.00	595	-9	34	25	-46	171	125	7
09	Other Teacher	51.00	127	3	7	10	13	35	48	6
100.168	Librarian	51.00	44	1	3	4	4	14	18	0
110, 111	Lawyer & Judge	51.00	58	0	2	2	2	12	14	0
12	Clergyman & Related	51.00	115	2	4	6	8	21	29	0
130, 132	Author & Editor	34.00	17	0	1	1	1	4	5	1
150, 151	Actor & Dancer	34.00	0	0	0	0	0	0	0	0
160.188	Accountant	37.00	358	22	12	34	109	58	167	3
162, 163	Buyer, Purch Agent									
	Sales Mgr	04.08	241	5	6	11	24	30	54	2
16, 18	Public Administrator	17.28	89	2	4	6	9	20	29	61
187.168	Restaurant, Cafe, Bar Mgr	04.07	233	5	9	14	23	46	69	6
187, 195	Recrea & Social Worker	51.00	94	4	4	8	18	22	40	20

TABLE 3: FUTURE DEMAND AND PRESENT SUPPLY BY OCCUPATION

DOT Code	DOT Title	Vocational Ed Code	1976 Empl	ONE YEAR NEEDS			FIVE YEAR NEEDS			ES Apps
				Expan- sion	Replace- ment	Total	Expan- sion	Replace- ment	Total	
2	Clerical & Sales					542			2711	
201.368	Secretary	14.0702	1170	36	75	111	180	376	556	30
202.388	Stenographer	14.0703	161	5	10	15	25	52	77	0
203.588	Typist	14.0902	466	14	31	45	72	157	229	12
206.388	File Clerk	14.0302	169	5	11	16	23	55	78	14
210.388	Bookkeeper & Billing Clerk	14.0102	885	22	47	69	110	235	345	9
212.368	Bank Teller & Cashier	14.0105	576	18	34	52	91	170	261	1
213.582	Key Punch Operator	14.020201	161	9	10	19	43	52	95	11
215.388	Bookkeeping & Billing Machine Operator	14.0104	62	3	4	7	16	22	38	0
215.488	Payroll Clerk	14.0104	70	2	3	5	10	15	25	0
222.478	Counter Clk. ex. Food	04.08	74	2	4	6	10	22	32	1
231, 233	Mail Handler & Postal Clerk	14.0403	474	-8	15	7	-41	73	32	3
235.862	Telephone Operator	14.0401	267	6	17	23	28	83	111	7
237.368	Receptionist	14.0406	114	3	8	11	16	41	57	29
249.268	Enumerator & Interviewer	14.0499	25	1	1	2	3	5	8	1
25, 276	Salesman, Services & Construction	04.99	132	4	6	10	19	28	47	3
250.258	Ins. Agent, Broker & Underwriter	04.13	245	7	8	15	36	39	75	0
250.258	Real Estate Agent and Broker	04.17	66	2	3	5	9	16	25	0
26, 27, 28	Salesman, Retail	04.08	273	8	9	17	40	46	86	31
289.158	Sales Rep, Mfg	04.12	173	5	4	9	25	20	45	0
289.158	Sales Rep, Wholesale	04.12	358	10	8	18	52	41	93	0
289.358	Demonstrator, Huckster and Peddler	04.20	79	2	4	6	11	19	30	9
290.478	Sales Clerk, Retail	04.08	870	26	48	74	128	238	366	9

TABLE 3: FUTURE DEMAND AND PRESENT SUPPLY BY OCCUPATION

DOT Code	DOT Title	Vocational 1976		ONE YEAR NEEDS			FIVE YEAR NEEDS			ES Apps
		Ed Code	EmPLY	Expan- sion	Replace- ment	Total	Expan- sion	Replace- ment	Total	
3	Service					384			1914	
30	Private Hsld Wrkr	09.0201	356	1	30	31	5	152	157	43
311.878	Busboy & Dishwasher	17.2904	162	4	6	10	20	29	49	56
311.878	Waiter & Waitress, Food counter & Fountain worker	17.2904	798	20	51	71	101	255	356	
313.381	Cook, Except Private	17.2902	557	13	32	45	64	159	223	14
316.884	Meat cutter	17.2903	265	0	6	6	-1	29	28	3
323.887	Maid, Exc Private	09.02	135	5	9	14	24	45	69	17
332.271	Cosmetologist	17.2602	168	2	12	14	10	61	71	1
354.878	Practical Nurse	07.0302	221	13	15	28	65	76	141	0
355.878	Hospital Attendant	07.0303	577	32	37	69	158	184	342	36
361, 362	Laundry, Dry Cleaning Operator	17.16	126	0	8	8	1	38	39	0
372.868	Guard & Watchman	17.2802	103	2	5	7	12	25	37	8
373.884	Fireman	17.2801	66	4	1	5	19	4	23	0
375	Police, Other Law	17.2802	201	10	4	14	48	20	68	1
382.884	Janitor	17.11	863	16	46	62	82	229	311	4
4	Agriculture					44			220	
409.168	Farm Managers & Farmers	01.0104 } 01.01 }	1500	-25	61	36	-126	306	180	1
421.181	Farm Laborers & Farm Foremen	01.01 }	525	-9	17	8	-44	84	40	8
421.883										
429.131										
5	Processing					6			34	
526.781	Bakers	17.2901	69	3	3	6	17	17	34	1

TABLE 3: FUTURE DEMAND AND PRESENT SUPPLY BY OCCUPATION

DOT Code	Dot Title	Vocational Ed Code	1976 Empl	ONE YEAR NEEDS			FIVE YEAR NEEDS			ES Apps
				Expan- sion	Replace- ment	Total	Expan- sion	Replace- ment	Total	
6	Machine Trades					84			424	
600.280	Machinist & Job and Die Setter	17.2302	240	3	4	7	14	22	36	12
601.280	Tool & Die Maker	17.2307	41	2	1	3	9	4	13	3
603, 604, 609.684	606 Precision Mach Oper Inspector, Mfg	17.2303	160	4	3	7	18	14	32	6
620.281	Auto Mech & Body Repairman	17.9900	175	7	5	12	34	24	58	0
621.281	Aircraft Mechanic	17.0302	806	29	14	43	147	71	218	43
637.281	Air Cond., Heat Refrig Repairman	17.0401	30	2	0	2	8	2	10	4
651.782	Pressman & Plateprinter	17.01	78	2	1	3	11	7	18	2
660.280	Cabinetmaker	17.1902	94	0	2	2	0	10	10	2
667.782	Sawyer	17.3601	16	0	1	1	1	3	4	0
68	Semiskilled Textile Operative	17.36	61	2	1	3	12	7	19	0
		17.3399	25	0	1	1	0	6	6	0
7	Bench Work					51			256	
706.887	Assemblers	17.2304	270	4	9	13	21	47	68	24
720.281	Radio & TV Repairman	17.1503	103	3	3	6	17	13	30	4
780, 785	Upholsterer & Tailor	17.33	77	1	4	5	5	18	23	0
785.381	Dressmaker & Seamstress Ex. Fact.	09.0202	59	2	5	7	11	23	34	1
786, 787	Sewer & Stitcher	17.3399	244	5	15	20	24	77	101	8

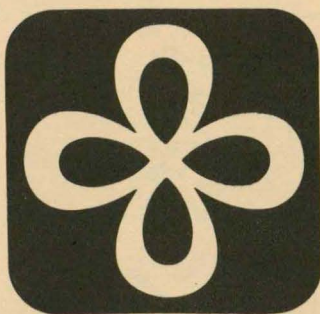
TABLE 3: FUTURE DEMAND AND PRESENT SUPPLY BY OCCUPATION

DOT Code	DOT Title	Vocational 1976		ONE YEAR NEEDS			FIVE YEAR NEEDS			ES Apps
		Ed Code	Empl	Expan- sion	Replace- ment	Total	Expan- sion	Replace- ment	Total	
8	Structural Work					91			447	
804.281	Sheet metal Worker	17.2305	119	3	2	5	17	9	26	2
81	Welder & Flamecutter	17.2306	281	9	5	14	43	23	66	53
821, 822	Lineman & Serviceman	17.1402	270	7	3	10	35	13	48	3
824.281	Electrician	17.1002	289	7	5	12	37	27	64	9
840.781	Painter, Mfg Articles	17.1005	29	1	1	2	5	3	8	11
840,841	Painter & Paperhanger	17.1005	120	1	4	5	7	20	27	5
842, 844	Plasterers & Cement Finishers	17.1006	36	0	1	1	1	3	4	10
859.883	Excav. & Grad. Mach. Oper.	17.1003	216	4	4	8	20	20	40	17
860.381	Carpenter	17.1001	430	8	14	22	38	68	106	17
861.381	Brickmason & Tile Set.	17.1004	59	1	1	2	3	5	8	1
862.381	Plumber & Pipefitter	17.1007	119	2	2	4	11	12	23	3
869.884	Construction Laborer	17.1099	197	2	4	6	8	19	27	18
9	Miscellaneous					242				1209
906.883	Truck Driver & Deliveryman	04.19	2001	80	36	116	402	179	581	22
910.383	Locomotive Engineer and Fireman	40.00	157	-3	5	2	-14	26	12	0
913.463	Bus Driver	04.19	74	3	2	5	13	11	24	4
913.463	Taxicab Driver & Chauffeur	04.19	69	3	3	6	16	14	30	
915.867	Garage Worker & Gas Station Attendant	04.16	274	8	5	13	40	24	64	30
920.885	Bottling & Canning Opr	17.2999	42	2	1	3	8	6	14	4
920.887	Packers & Wrappers Ex. Produ	17.9900	308	12	12	24	60	58	118	11
929.887	Frtn., Stock & Material Handler	04.19	962	8	16	24	40	82	122	68
939.281	Mine Operative N.E.C.	17.2400	0	0	0	0	0	0	0	0
950.782	Stationary Engr.	17.32	137	2	4	6	8	18	26	4
951.885	Stationary Fireman	17.32	0	0	0	0	0	0	0	0
973.381	Compositor & Type- setter	17.1901	81	1	2	3	3	12	15	1
	Foreman, N.E.C.	17.99	824	24	16	40	122	81	203	

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