

PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

INFORMATIONAL MEMORANDUM

DATE: MARCH 31, 1946

SUBJECT: TRAFFIC VOLUME TRENDS

Traffic during February 1946 continued to show approximately the same recovery from wartime levels that were indicated in the reports received in the previous month. On the basis of preliminary estimates, total travel during February 1946 on rural roads exceeded the amount of such traffic in February of 1941 by 5.9 percent. Traffic on main highways was 8.7 percent above while that on local roads was 1.1 percent below the 1941 figures.

Traffic in the two western regions was 25.2 percent above corresponding 1941 counts; that in the central regions was 0.3 percent above, while that in the eastern regions was 2.0 percent below the 1941 levels. In comparison with 1945 figures, traffic in the western regions increased 63.3 percent, that in the central regions 52.4 percent, and that in the eastern regions 62.9 percent.

Comparisons of city traffic in February 1946 with corresponding traffic in February 1945 are as follows:

6 stations in Chicago, Illinois +31.6 percent.
3 stations in Detroit, Michigan +28.5 percent.
1 station in Santa Fe, New Mexico +25.7 percent.
5 stations in St. Louis, Missouri +35.9 percent.

H. S. FAIRBANK, DEPUTY COMMISSIONER
PUBLIC ROADS ADMINISTRATION

Attachments

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

PHYSICS 309

LECTURE 10

1. The first part of the lecture discusses the concept of a vector field. A vector field is a collection of vectors assigned to each point in space. The vectors represent the direction and magnitude of a physical quantity at that point. For example, the velocity of a fluid at different points in a flow field can be represented by a vector field.

2. The second part of the lecture discusses the concept of a scalar field. A scalar field is a collection of scalar values assigned to each point in space. The scalar values represent the magnitude of a physical quantity at that point. For example, the temperature of a fluid at different points in a flow field can be represented by a scalar field.

3. The third part of the lecture discusses the concept of a vector potential. A vector potential is a vector field whose curl is equal to the vector field. This concept is useful in the study of electromagnetism, where the magnetic field can be expressed as the curl of a vector potential.

4. The fourth part of the lecture discusses the concept of a scalar potential. A scalar potential is a scalar field whose gradient is equal to the vector field. This concept is useful in the study of electromagnetism, where the electric field can be expressed as the negative gradient of a scalar potential.

5. The fifth part of the lecture discusses the concept of a vector field in a curved space. In a curved space, the vectors are defined relative to a local coordinate system. The concept of a vector field in a curved space is important in the study of general relativity, where the spacetime is curved.

6. The sixth part of the lecture discusses the concept of a scalar field in a curved space. In a curved space, the scalar values are defined relative to a local coordinate system. The concept of a scalar field in a curved space is important in the study of general relativity, where the spacetime is curved.

7. The seventh part of the lecture discusses the concept of a vector field in a curved space. In a curved space, the vectors are defined relative to a local coordinate system. The concept of a vector field in a curved space is important in the study of general relativity, where the spacetime is curved.

8. The eighth part of the lecture discusses the concept of a scalar field in a curved space. In a curved space, the scalar values are defined relative to a local coordinate system. The concept of a scalar field in a curved space is important in the study of general relativity, where the spacetime is curved.

9. The ninth part of the lecture discusses the concept of a vector field in a curved space. In a curved space, the vectors are defined relative to a local coordinate system. The concept of a vector field in a curved space is important in the study of general relativity, where the spacetime is curved.

10. The tenth part of the lecture discusses the concept of a scalar field in a curved space. In a curved space, the scalar values are defined relative to a local coordinate system. The concept of a scalar field in a curved space is important in the study of general relativity, where the spacetime is curved.

TABLE 1.--PRELIMINARY SUMMARY OF AUTOMATIC TRAFFIC RECORDER DATA FOR
FEBRUARY 1946 INCLUDING 538 STATIONS IN 42 STATES¹

Type of highway and State	Number of stations	Percentage change from Feb. 1945	Type of highway and State	Number of stations	Percentage change from Feb. 1945		
<i>STATE HIGHWAYS</i>			<i>STATE HIGHWAYS (Continued)</i>				
Alabama	7	+41.0	Vermont	7	+69.3		
Arizona	5	+69.8	Virginia	3	+44.3		
Arkansas	13	+84.5	Washington	10	+57.2		
California	6	+81.1	West Virginia	11	+64.4		
Colorado	6	+45.7	Wisconsin	9	+48.7		
Connecticut	17	+68.5	Wyoming	5	+57.9		
Delaware	6	+49.8	<i>TOTAL - 42 STATES</i>		514	+63.0	
Florida	18	+85.4	<i>LOCAL HIGHWAYS</i>				
Georgia	6	+79.2	Alabama	2	+47.7		
Idaho	8	+48.0	Connecticut	3	+34.0		
Illinois	4	+47.8	Delaware	2	+28.4		
Indiana	21	+59.1	Georgia	3	+25.7		
Kentucky	12	+58.3	Indiana	1	+69.8		
Louisiana	8	+35.5	Maryland	1	+19.6		
Maine	10	+48.3	Michigan	2	+43.8		
Maryland	17	+49.3	Missouri	1	+20.8		
Massachusetts	9	+45.4	Montana	2	+22.1		
Michigan	26	+31.5	Nebraska	1	+37.6		
Mississippi	10	+49.7	North Dakota	1	- 3.2		
Missouri	19	+85.2	Ohio	2	+48.6		
Montana	12	+49.6	Oregon	1	+55.4		
Nebraska	10	+50.6	Rhode Island	1	+59.1		
Nevada	16	+66.9	Wisconsin	1	+ 6.9		
New Hampshire	5	+49.4	<i>TOTAL - 15 STATES</i>		24	+44.6	
New Mexico	13	+46.2	<i>ALL HIGHWAYS</i>				
New York	2	+30.6	<i>42 STATES</i>			538	+57.7
North Dakota	11	+40.3	<i>3 EASTERN REGIONS</i>			153	+62.9
Ohio	20	+52.1	<i>4 CENTRAL REGIONS</i>			287	+52.4
Oklahoma	20	+67.8	<i>2 WESTERN REGIONS</i>			98	+63.3
Oregon	4	+76.0					
Pennsylvania	29	+61.5					
Rhode Island	3	+24.4					
South Dakota	8	+42.3					
Tennessee	4	+75.6					
Texas	74	+41.9					
Utah	10	+39.6					

¹Includes all States except Iowa, Kansas, Minnesota, New Jersey, North Carolina, and South Carolina.

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TABLE 2.--REVISED SUMMARY OF AUTOMATIC TRAFFIC RECORDER DATA FOR
JANUARY 1946 INCLUDING 622 STATIONS IN 45 STATES¹

Region and State	Number of stations	Percentage change from Jan. 1945	Region and State	Number of stations	Percentage change from Jan. 1945
NEW ENGLAND			EAST SOUTH CENTRAL		
Connecticut	20	+70.5	Alabama	10	+32.7
Maine	10	+46.0	Kentucky	11	+59.3
Massachusetts	9	+44.6	Mississippi	10	+34.6
New Hampshire	14	+63.5	Tennessee	6	+56.8
Rhode Island	3	+25.4	Subtotal	37	+44.8
Vermont	9	+60.3	WEST SOUTH CENTRAL		
Subtotal	65	+57.9	Arkansas	13	+58.9
MIDDLE ATLANTIC			Louisiana	8	+30.0
New York	5	+45.8	Oklahoma	20	+52.8
Pennsylvania	29	+83.2	Texas	74	+37.6
Subtotal	34	+73.6	Subtotal	115	+40.1
SOUTH ATLANTIC			MOUNTAIN		
Delaware	8	+53.3	Arizona	4	+72.2
Maryland	18	+54.2	Colorado	6	+44.0
Virginia	3	+75.4	Idaho	8	+43.0
West Virginia	11	+63.1	Montana	14	+42.8
Subtotal north portion	40	+57.2	Nevada	16	+64.7
Florida	19	+71.5	New Mexico	12	+44.9
Georgia	8	+61.4	Utah	10	+11.9
North Carolina	20	+59.2	Wyoming	6	+40.6
Subtotal south portion	47	+64.7	Subtotal	76	+44.7
Subtotal region	87	+61.9	PACIFIC		
EAST NORTH CENTRAL			California	6	+71.7
Illinois	4	+35.6	Oregon	5	+73.2
Indiana	22	+58.7	Washington	10	+47.8
Michigan	28	+34.4	Subtotal	21	+60.6
Ohio	20	+68.3	TOTAL ALL STATES²	622	+53.1
Wisconsin	10	+44.2	STATE HIGHWAYS²	587	+60.0
Subtotal	84	+48.1	LOCAL HIGHWAYS	35	+35.5
WEST NORTH CENTRAL			3 EASTERN REGIONS	186	+65.6
Iowa	35	+41.7	4 CENTRAL REGIONS	339	+44.2
Kansas ³	14	+27.2	2 WESTERN REGIONS	97	+55.4
Missouri	23	+52.8			
Nebraska	11	+40.0			
North Dakota	12	+21.0			
South Dakota	8	+32.7			
Subtotal	103	+42.1			

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¹Combined State and local highways.

²Includes all States except Minnesota, New Jersey, and South Carolina.

³Abnormal conditions in 1945 or 1946 affected 2 counts in the following States: Kansas, excluding station 10, the increase is 48.2 percent. Louisiana, excluding station 23, the increase is 37.0 percent.

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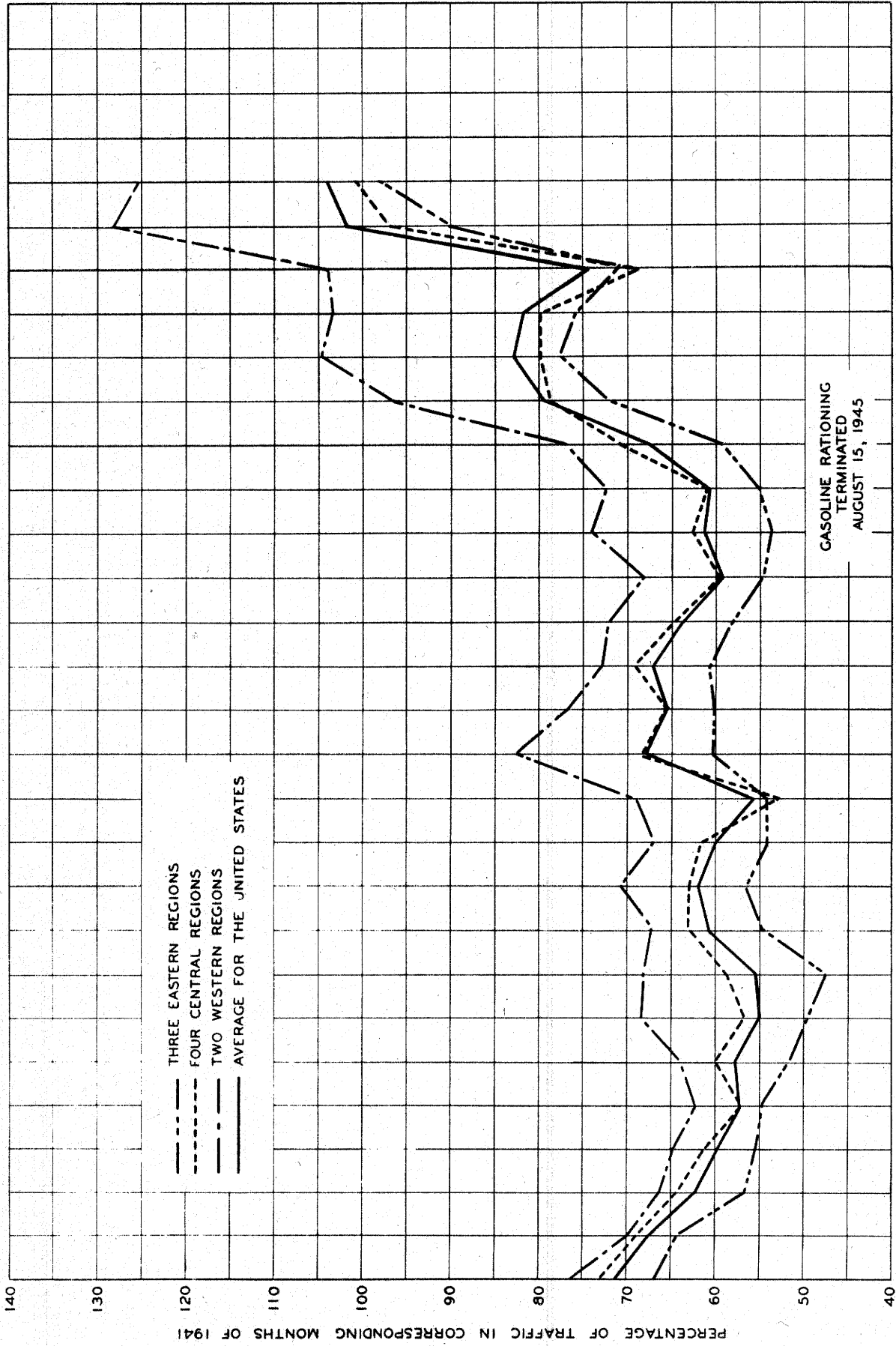
TABLE 3.--NUMBER OF VEHICLES, CLASSIFIED BY TYPES, USING TOLL FACILITIES IN FEBRUARY 1946 COMPARED WITH THOSE IN FEBRUARY 1945 AND 1941.

Facilities	1946			Percentage change from 1945			Percentage change from 1941		
	Total	Passenger cars	Trucks and busses	Total	Passenger cars	Trucks and busses	Total	Passenger cars	Trucks and busses
EASTERN REGIONS									
2 in the New England States	11,416	8,906	2,510	+52.3	+54.9	+43.8	+31.1	+22.2	+76.8
13 in the Middle Atlantic States	4,530,901	4,060,477	470,424	+64.6	+72.7	+16.9	+10.2	+ 9.2	+19.5
Fleetwood Viaduct, Westchester County, New York	248,696	248,696	--	+168.7	+168.7	--	-16.1	-16.1	--
6 in the South Atlantic States	346,422	285,214	61,228	+69.8	+99.6	+ 0.2	+11.1	+11.8	+ 8.4
TOTAL - 22 facilities¹	5,137,455	4,603,293	534,162	+68.0	+77.6	+14.8	+ 8.7	+ 7.7	+18.3
TOTAL - 26 facilities	5,463,782	4,890,577	573,205	+68.9	+78.7	+15.0			
CENTRAL REGIONS									
2 on the Great Lakes Canadian Border ²	78,789	71,518	7,271	+80.1	+100.8	-10.4	+88.0	+94.0	+43.9
2 in the Great Lakes Region	60,191	44,626	15,565	+53.3	+111.1	-14.1	+ 5.0	+20.1	-22.8
<i>Subtotal - 4 facilities</i>	<i>138,980</i>	<i>116,144</i>	<i>22,836</i>	<i>+67.4</i>	<i>+104.6</i>	<i>-13.0</i>	<i>+40.0</i>	<i>+56.9</i>	<i>- 9.4</i>
1 on the Ohio River ³	628,906	525,312	103,594	+10.5	+11.2	+ 6.9	+ 4.5	+ 4.9	+ 2.4
in Kentucky	18,516	13,164	5,352	+49.2	+64.0	+22.1	+70.0	+74.7	+59.4
<i>Subtotal - 2 facilities</i>	<i>647,422</i>	<i>538,476</i>	<i>108,946</i>	<i>+11.3</i>	<i>+12.2</i>	<i>+ 7.6</i>	<i>+ 5.6</i>	<i>+ 5.9</i>	<i>+ 4.2</i>
7 on the Mississippi and St. Croix Rivers St. Louis and north	268,982	231,333	37,649	+25.1	+28.2	+ 8.7	+38.5	+39.5	+32.6
2 on the Mississippi River south of St. Louis	45,587	33,297	12,290	+41.1	+60.8	+ 6.1	+15.1	+31.8	-14.2
<i>Subtotal - 9 facilities</i>	<i>314,569</i>	<i>264,630</i>	<i>49,939</i>	<i>+27.2</i>	<i>+31.5</i>	<i>+ 8.0</i>	<i>+34.6</i>	<i>+38.5</i>	<i>+16.8</i>
5 on the Missouri River	336,608	345,768	90,840	+20.7	+22.5	+16.0	+ 4.3	- 0.7	+20.5
in the Missouri River area	3,068	2,521	547	+69.8	+81.6	+30.5	+13.5	+16.1	+ 2.6
<i>Subtotal - 7 facilities</i>	<i>339,676</i>	<i>348,289</i>	<i>91,387</i>	<i>+21.0</i>	<i>+22.9</i>	<i>+16.2</i>	<i>+ 4.4</i>	<i>- 0.5</i>	<i>+20.4</i>
TOTAL - 29 facilities¹	1,440,647	1,167,539	273,108	+20.8	+24.2	+ 8.2	+13.8	+14.1	+10.0
TOTAL - 33 facilities	1,560,067	1,272,338	287,729	+22.8	+26.5	+ 8.7			
WESTERN REGIONS									
2 in California	2,178,068	1,985,612	192,456	+36.1	+40.7	+ 1.4	+43.3	+41.3	+68.0
4 in the Oregon-Washington Area	272,820	237,585	35,235	+58.9	+64.7	+28.0	+106.5	+102.7	+136.5
TOTAL - 6 facilities	2,450,888	2,223,197	227,691	+38.3	+43.0	+ 4.8	+48.4	+46.1	+75.8
UNITED STATES									
TOTAL - 57 facilities¹	9,028,990	7,994,029	1,034,961	+49.9	+57.1	+10.7	+18.0	+17.2	+24.8
TOTAL - 65 facilities	9,474,737	8,386,112	1,088,625	+50.9	+58.3	+11.0			

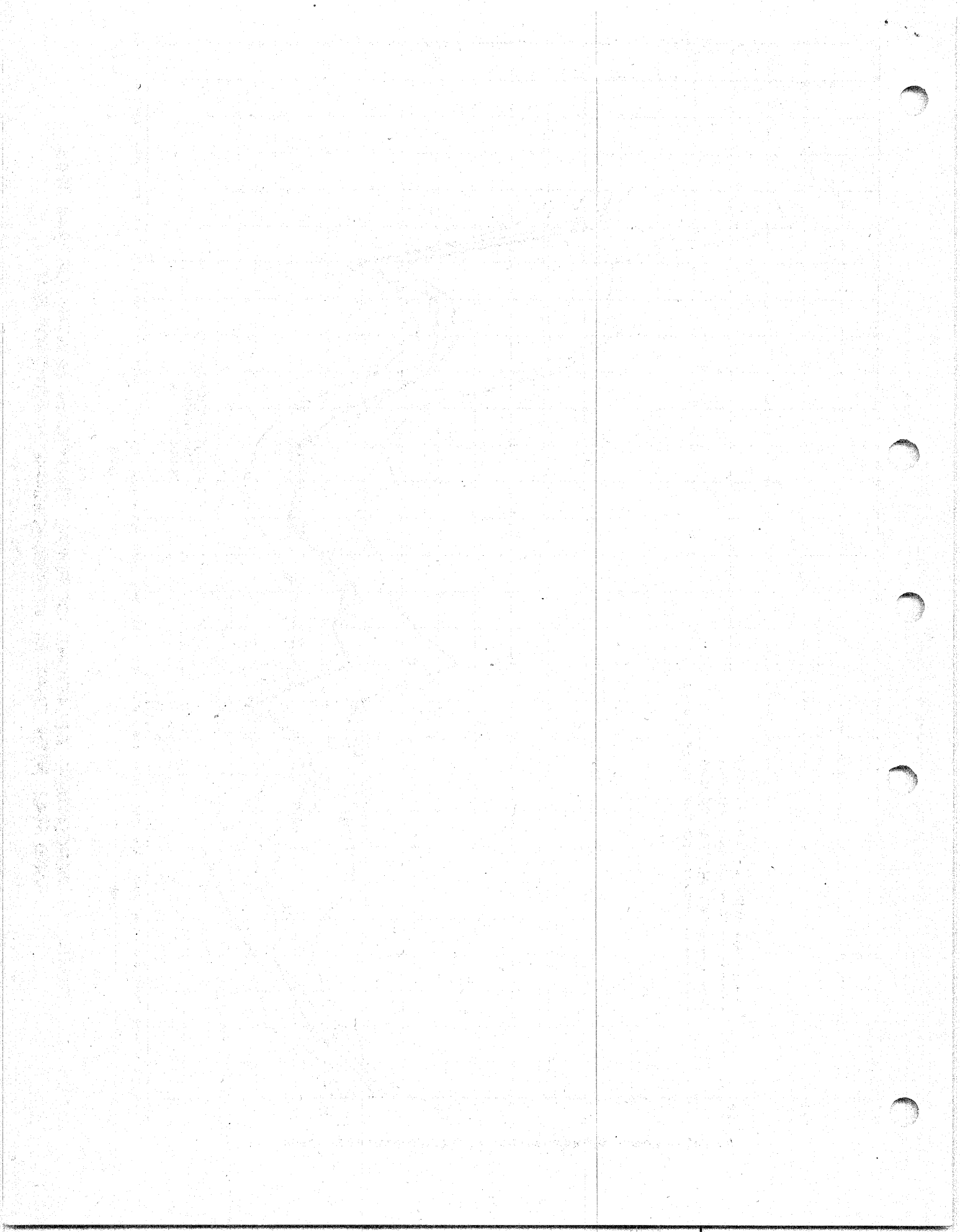
¹These facilities have comparative data for 1946, 1945, and 1941 and are included in the larger total below.

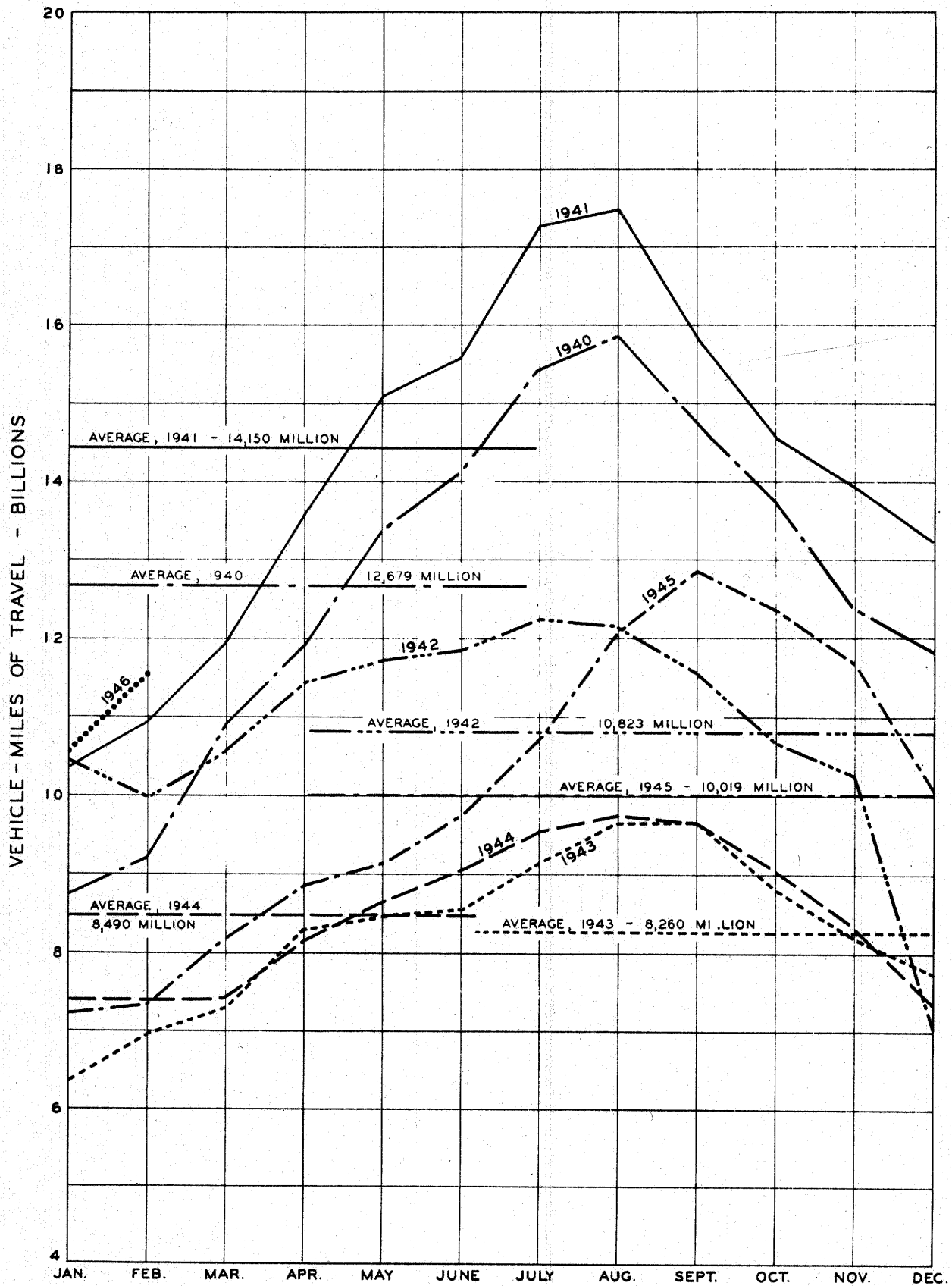
²Two of these facilities are in Western New York and therefore are related to similar facilities in the Central States.

³Four of these facilities are between Ohio and West Virginia.



P-3125 FIGURE 1.— PERCENTAGE RELATIONS OF RURAL TRAFFIC IN MONTHS OF 1944, 1945 AND 1946 WITH THAT IN CORRESPONDING MONTHS OF 1941.





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FIGURE 2.- VEHICLE-MILES OF TRAVEL ON ALL RURAL ROADS 1940 TO 1946 BY MONTHS.



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