

PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

INFORMATIONAL MEMORANDUM NO. 63

DATE: APRIL 29, 1944

SUBJECT: TRAFFIC VOLUME TRENDS

The preliminary data for March 1944 indicate that traffic in this month was approximately the same as that on rural roads during March of 1943. Traffic in the eastern portion of the country increased 1.3 percent; in the central portion decreased 1.5 percent, while that in the western section decreased 0.4 percent. In the entire country traffic had fallen off only 0.5 percent from that estimated for March 1943.

Comparisons of city traffic in March 1944 with that in March 1943 are as follows:

11 stations in Washington, D. C.	+ 2.6
3 stations in Detroit, Michigan	- 5.7
13 stations in Lincoln, Nebraska	-18.1

H. S. FAIRBANK, DEPUTY COMMISSIONER,
PUBLIC ROADS ADMINISTRATION.

Attachments.

1. The first part of the document is a list of names and addresses of the members of the committee.

2. The second part of the document is a list of names and addresses of the members of the committee.

3. The third part of the document is a list of names and addresses of the members of the committee.

4. The fourth part of the document is a list of names and addresses of the members of the committee.

5. The fifth part of the document is a list of names and addresses of the members of the committee.

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7. The seventh part of the document is a list of names and addresses of the members of the committee.

8. The eighth part of the document is a list of names and addresses of the members of the committee.

9. The ninth part of the document is a list of names and addresses of the members of the committee.

TABLE 1.--PRELIMINARY SUMMARY OF AUTOMATIC TRAFFIC RECORDER DATA
FOR MARCH 1944 INCLUDING 599 STATIONS IN 44 STATES¹

Type of highway and State	Number of stations	Percent change from March 1943	Type of highway and State	Number of stations	Percent change from March 1943
<i>STATE HIGHWAYS</i>			<i>STATE HIGHWAYS</i>		
Alabama	8	+10.8	Texas	71	+ 4.5
Arizona	5	+ 5.6	Utah	8	- 8.8
Arkansas	21	- 0.1	Vermont	7	+ 3.0
California	10	+ 9.3	Virginia	7	-11.4
Colorado	4	-12.0	Washington	9	- 5.7
Connecticut	17	+ 3.7	West Virginia	11	- 4.5
Delaware	4	-11.6	Wisconsin	9	- 4.1
Georgia	7	+ 9.5	Wyoming	3	-11.4
Idaho ²	7	+ 8.5			
Illinois	2	+ 5.0	<i>TOTAL - 44 STATES</i>	563	- 0.6
Iowa	26	-13.6	<i>LOCAL HIGHWAYS</i>		
Kansas ²	9	+ 3.4	Alabama	1	+ 5.7
Kentucky	13	+ 0.6	Connecticut	3	+ 2.6
Louisiana ²	8	+30.8	Georgia	4	+ 8.0
Maine	11	+ 8.3	Iowa	10	-27.2
Maryland	16	+ 4.8	Maryland	1	+16.8
Massachusetts	8	+ 7.0	Michigan	2	+ 3.7
Michigan	26	- 8.5	Missouri	2	+ 3.4
Mississippi	10	+12.6	Montana	2	+24.8
Missouri	25	- 5.7	Nebraska	1	+ 5.3
Montana	12	+ 1.6	North Dakota	2	+27.0
Nebraska	11	- 8.8	Ohio	3	- 4.4
Nevada ²	12	-30.0	Oregon	1	+ 6.2
New Hampshire	14	- 1.2	Rhode Island	1	-32.6
New Mexico	13	+ 4.5	Tennessee	2	+ 1.9
New York	11	+ 2.5	Wisconsin	1	-11.5
North Carolina	20	+ 8.0			
North Dakota	10	+10.8	<i>TOTAL - 15 STATES</i>	36	- 0.3
Ohio	24	- 7.8	<i>ALL HIGHWAYS</i>		
Oklahoma	20	+ 3.4	<i>44 STATES</i>	599	- 0.5
Oregon	3	- 2.6	<i>3 EASTERN REGIONS</i>	180	+ 1.3
Pennsylvania	30	- 7.3	<i>4 CENTRAL REGIONS</i>	330	- 1.5
Rhode Island	3	+ 4.3	<i>2 WESTERN REGIONS</i>	89	- 0.4
South Carolina	5	+27.7			
South Dakota	10	- 2.8			
Tennessee ²	3	+31.3			

¹ Includes all States except the following: Florida, Indiana, Minnesota, and New Jersey.

² Abnormal conditions in 1943 or 1944 affect 5 counts in the following States: Idaho, excluding station 7 the increase is 0.1 percent. Kansas, excluding station 10 there is a decrease of 6.5 percent. Louisiana, excluding station 23 the increase is 11.0 percent. Nevada, excluding station 110 the decrease is 3.3 percent. Tennessee, excluding station 6 the increase is 15.3 percent.

TABLE 2.--REVISED SUMMARY OF AUTOMATIC TRAFFIC RECORDER DATA FOR FEBRUARY 1944
AND INCLUDING 619 STATIONS IN 46 STATES¹

Region and State	Number of stations	Percent change from February 1943	Region and State	Number of stations	Percent change from February 1943
NEW ENGLAND			EAST SOUTH CENTRAL		
Connecticut	20	+20.5	Alabama	9	+ 8.7
Maine	11	+15.7	Kentucky	11	+ 1.1
Massachusetts	9	+19.5	Mississippi	10	+12.4
New Hampshire	7	+14.5	Tennessee ²	5	+30.3
Rhode Island	3	+17.5	Subtotal	35	+10.3
Vermont	7	+ 8.0	WEST SOUTH CENTRAL		
Subtotal	57	+18.6	Arkansas	20	- 7.1
MIDDLE ATLANTIC			Louisiana ²	8	+29.1
New York	11	+16.5	Oklahoma	20	- 2.9
Pennsylvania	30	+11.4	Texas	70	+ 2.1
Subtotal	41	+13.2	Subtotal	118	+ 3.2
SOUTH ATLANTIC			MOUNTAIN		
Delaware	4	- 5.2	Arizona	5	+ 4.5
Maryland	17	+14.7	Colorado	5	- 7.8
Virginia	5	- 1.0	Idaho	6	+ 8.1
West Virginia	11	+ 9.1	Montana	14	+ 1.8
Subtotal, north portion	37	+ 8.0	Nevada ²	13	-32.5
Florida	19	+25.4	New Mexico ²	13	+12.1
Georgia	8	+16.2	Utah	6	- 4.5
North Carolina	18	+14.9	Wyoming	4	-15.3
South Carolina	7	+29.5	Subtotal	66	- 3.8
Subtotal, south portion	52	+20.7	PACIFIC		
Subtotal region	89	+15.1	California	9	+13.5
EAST NORTH CENTRAL			Oregon	3	- 1.4
Illinois	3	- 9.7	Washington	9	+ 2.3
Indiana	23	+ 1.2	Subtotal	21	+ 7.3
Michigan	28	- 2.0	TOTAL ALL STATES¹	619	+ 5.5
Ohio	25	+ 0.2	STATE HIGHWAYS¹	581	+ 6.2
Wisconsin	11	+ 4.5	LOCAL HIGHWAYS	38	+ 3.9
Subtotal	90	- 0.2	3 EASTERN REGIONS	187	+14.9
WEST NORTH CENTRAL			4 CENTRAL REGIONS	345	+ 0.8
Iowa	35	- 6.4	2 WESTERN REGIONS	87	+ 3.5
Kansas ²	9	+ 5.1			
Missouri	27	- 8.7			
Nebraska	11	- 7.8			
North Dakota	10	+27.7			
South Dakota	10	+ 2.2			
Subtotal	102	- 5.0			

¹Includes all States except the following: Minnesota and New Jersey.

²Abnormal conditions in 1944 affect five counts in the following States: Louisiana, excluding station 23 the increase is 10.1 percent. Kansas, excluding station 10 there is a decrease of 3.9 percent. Nevada, excluding station 110 the decrease is 7.8 percent. New Mexico, excluding station 3 the increase is 7.2 percent. Tennessee, excluding station 6 the increase is 9.4 percent.

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TABLE 3.--NUMBER OF VEHICLES, CLASSIFIED BY TYPES, USING TOLL FACILITIES AND DRAWBRIDGES IN MARCH 1944 COMPARED WITH THOSE IN MARCH 1943 AND 1941.

Facilities	March 1944			Percentage change from 1943			Percentage change from 1941		
	Total	Passenger cars	Trucks and busses	Total	Passenger cars	Trucks and busses	Total	Passenger cars	Trucks and busses
3 eastern regions									
3 in the New England States	25,701	22,877	2,824	- 6.5	- 4.4	-20.5	-17.3	-19.7	+ 8.0
11 in the Middle Atlantic States	3,412,718	2,591,954	820,764	+12.1	+16.6	0.0	-12.0	-16.8	+ 7.8
Fleetwood Viaduct, Westchester County, New York	117,951	117,951	---	+43.6	+43.6	--	-64.2	-64.2	--
Pennsylvania Turnpike	70,298	44,932	25,366	+ 3.2	+13.1	-10.5	-43.1	-55.2	+10.0
7 in the South Atlantic States	379,638	291,884	87,754	+10.6	+16.4	- 5.0	-17.2	-24.3	+19.7
TOTAL - 23 facilities in the Eastern States ¹	4,006,306	3,069,598	936,708	+12.4	+17.2	-0.8	-16.9	-22.5	+ 8.9
TOTAL - 27 facilities in the Eastern States	4,264,301	3,286,053	978,248	+12.3	+16.6	0.0			
4 central regions									
6 on the Great Lakes Canadian Border ²	230,686	191,075	39,611	+27.3	+29.4	+17.7	+ 3.2	- 2.6	+45.1
2 in the Great Lakes Region	44,537	26,740	17,797	-12.2	-14.3	- 8.8	-41.5	-47.3	-30.0
Subtotal - 8 facilities	275,223	217,815	57,408	+18.6	+21.8	+ 8.0	- 8.1	-11.8	+ 8.9
9 on the Ohio River ³	676,067	561,495	114,572	- 5.1	- 6.7	+ 3.4	-18.3	-19.1	-14.0
10 in Kentucky	128,369	98,692	29,677	+24.6	+26.0	+20.2	- 3.4	- 9.3	+23.0
Subtotal - 19 facilities	804,436	660,187	144,249	- 1.4	- 2.9	+ 6.5	-16.2	-17.8	- 8.4
10 on the Mississippi and St. Croix Rivers, St. Louis and north	820,904	615,807	205,097	- 4.2	- 2.3	- 9.5	-28.8	-31.4	-19.7
Subtotal - 10 facilities	820,904	615,807	205,097	- 4.2	- 2.3	- 9.5	-28.8	-31.4	-19.7
3 on the Missouri River	90,166	65,668	24,498	+ 1.7	+ 3.0	- 1.8	- 2.3	- 5.6	+ 8.0
2 in the Missouri River area	2,170	1,570	600	+ 8.7	- 1.5	+48.9	-40.3	-46.8	-12.4
Subtotal - 5 facilities	92,336	67,238	25,098	+ 1.8	+ 2.9	- 1.0	- 3.7	- 7.3	+ 7.4
TOTAL - 42 facilities in the Central States ¹	1,992,899	1,561,047	431,852	- 0.1	+ 0.4	- 2.0	-20.6	-22.7	-11.7
TOTAL - 47 facilities in the Central States	2,089,943	1,631,379	458,564	+ 0.4	+ 1.1	- 2.1			
2 western regions									
3 facilities in California	1,649,535	1,436,370	213,165	- 1.1	- 2.1	+ 6.0	- 8.1	-13.7	+63.8
5 facilities in the Oregon-Washington area	184,740	154,994	29,746	+ 3.0	+ 3.4	+ 0.7	+ 4.0	- 1.8	+50.1
TOTAL - 8 facilities in the Western States	1,834,275	1,591,364	242,911	- 0.7	- 1.6	+ 5.4	- 7.0	-12.7	+62.0
TOTAL - 73 facilities in the United States ¹	7,833,480	6,222,009	1,611,471	+ 5.8	+ 7.4	- 3.0	-15.8	-20.2	+ 7.5
TOTAL - 82 facilities in the United States	8,188,519	6,508,796	1,679,723	+ 6.0	+ 7.6	+ 0.2			
38 drawbridges in eastern North Carolina (not toll) based on two 8-hour counts (one Sunday and one weekday at each station)	33,805	26,393	7,412	+ 1.5	+ 4.1	- 6.8	-21.9	-26.2	- 1.6

¹These facilities have comparative data for 1944, 1943, and 1941 and are included in the larger total below.

²Three of the facilities are in western New York and therefore are related to similar facilities in the Central States.

³Five of the facilities are between Ohio and West Virginia.

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

PHYSICS 311

LECTURE 10

THE HARMONIC OSCILLATOR

1. Introduction

2. The Harmonic Oscillator

3. The Harmonic Oscillator

4. The Harmonic Oscillator

5. The Harmonic Oscillator

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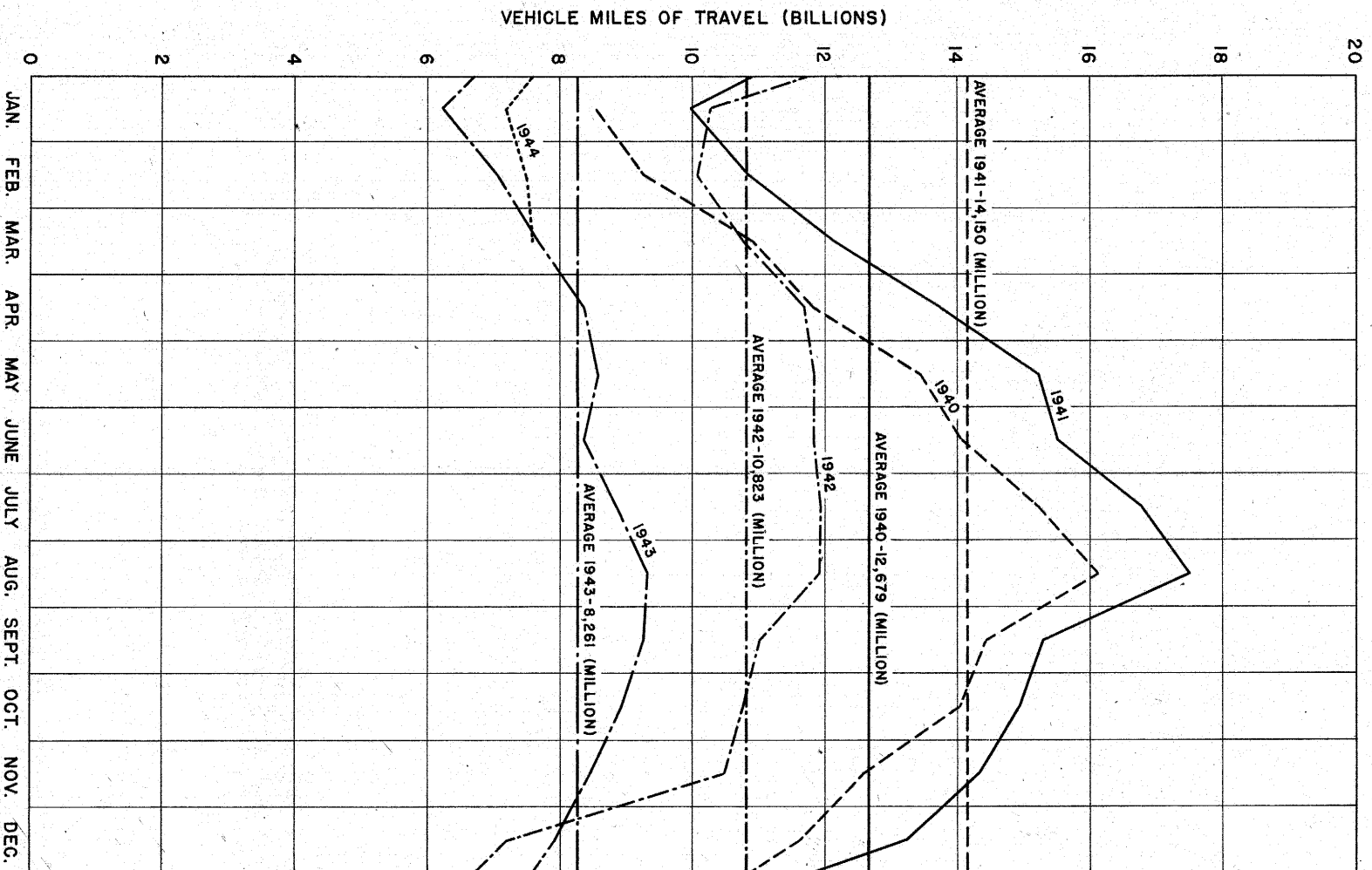


FIGURE 1. VEHICLE MILES OF TRAVEL ON ALL RURAL ROADS 1940 TO 1944 BY MONTHS



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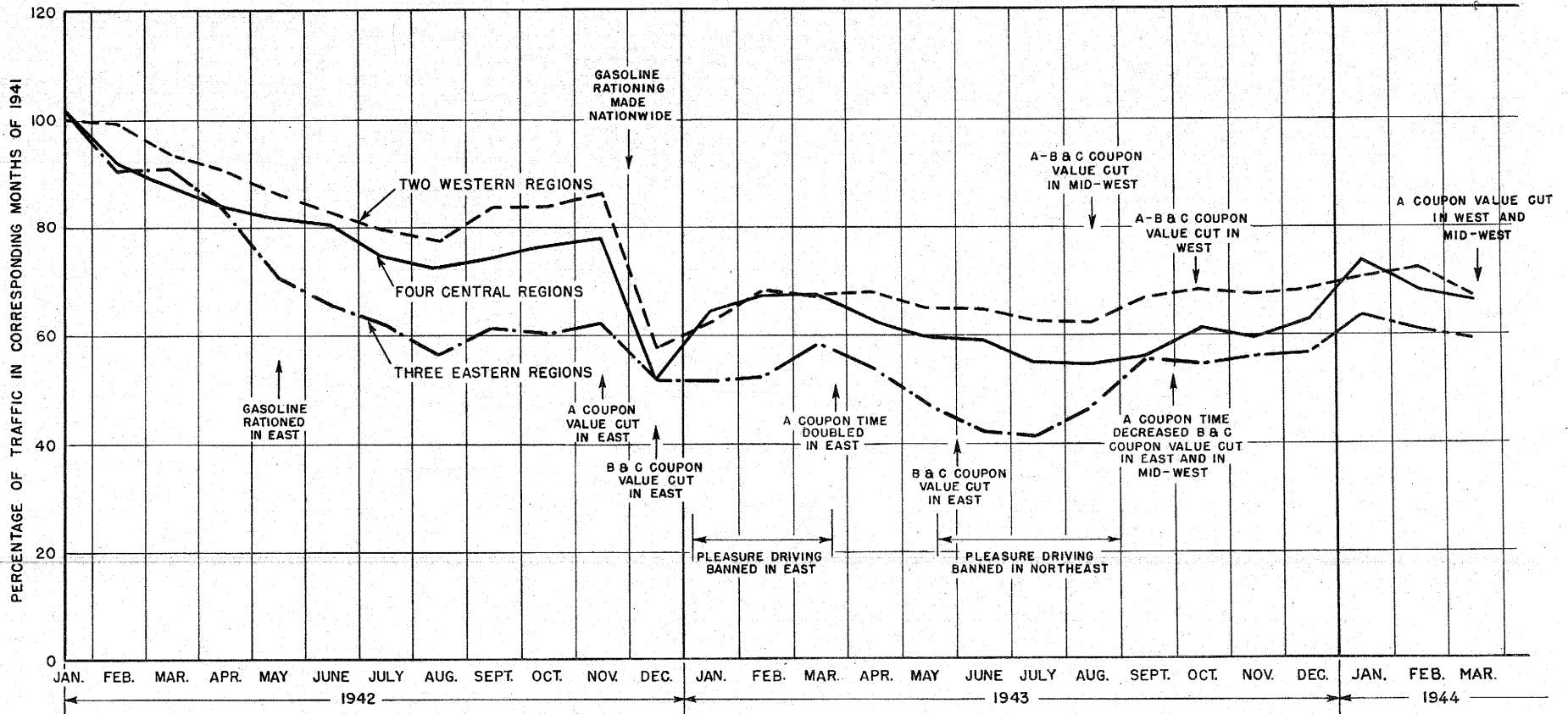


FIGURE 2. PERCENTAGE RELATIONS OF RURAL TRAFFIC IN MONTHS OF 1942, 1943, AND 1944 WITH THAT IN CORRESPONDING MONTHS OF 1941

