TO: Jim Reierson  
Site and Development Unit

FROM: Robert Doerr  
Sr. Highway Technician

DATE: 9-23-80  
PHONE: 296-7588

SUBJECT: Highforest Rest Area Usage Study, I90 Eastbound

This rest area usage study was done to provide information on current use patterns. This information will be used in spacing rest areas and providing the proper numbers of facilities.

The information is obtained by giving each vehicle entering the rest area a questioneer which is answered during their stay in the area. The questioneer is then collected as the vehicle leaves the area. The study is preformed for 5 consecutive days Thursday-Monday 8 hours per day.

The mainline traffic is counted and classified according to type of vehicle during the same time period. This allows us to derive averages for stopping and length of stay for each type of vehicle using the rest area.

The following information was collected:
SUMMARY

Date: July 31st - August 4th, 1980
Hours: 9 A.M. to 5 P.M.
Weather: Warm and partly cloudy, except for showers Monday morning

Total vehicles entering mainline Eastbound: 9,383
Vehicles entering rest area 9 A.M. to 5 P.M.: 1,200
Percent of vehicles stopping 9 A.M. to 5 P.M.: 12.8%

Total people using rest area 9 A.M. to 5 P.M.: 3,149
Average persons per vehicle: 2.6
Average time in rest area: 15.6 min.

PURPOSE FOR ENTERING AREA

Use rest rooms: 60.7%
Just to Rest: 11.2%
Eat/Picnic: 10.0%
Water: 6.6%
Other: 5.5%
Telephone: 2.1%
Use Refuse Containers: 1.9%
Use Travel Information Board: 1.6%
Dispose of Sewage: 0.4%

PERCENT OF PEOPLE USING

Rest Rooms: 77.6%
Drinking Water: 43.3%

PERCENT OF VEHICLES USING

Refuse Containers: 25.2%
Picnic Tables: 13.8%
Travel Information: 8.4%
Picnic Shelter: 6.5%
Telephone: 5.3%
Other: 5.1%
Electricity: 0.5%

NUMBER OF VEHICLES THAT STOPPED 9 A.M. to 5 P.M.

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Vehicles Entering</th>
<th>Out of State</th>
<th>Vehicles on Mainline</th>
<th>Percent Stopping</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 31</td>
<td>Thur.</td>
<td>246</td>
<td>200</td>
<td>1,675</td>
<td>14.6</td>
</tr>
<tr>
<td>Aug. 1</td>
<td>Fri.</td>
<td>239</td>
<td>193</td>
<td>1,956</td>
<td>12.2</td>
</tr>
<tr>
<td>Aug. 2</td>
<td>Sat.</td>
<td>252</td>
<td>198</td>
<td>1,921</td>
<td>13.1</td>
</tr>
<tr>
<td>Aug. 3</td>
<td>Sun.</td>
<td>216</td>
<td>165</td>
<td>2,007</td>
<td>10.8</td>
</tr>
<tr>
<td>Aug. 4</td>
<td>Mon.</td>
<td>247</td>
<td>175</td>
<td>1,824</td>
<td>13.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1200</td>
<td>931</td>
<td>9,383</td>
<td>12.8</td>
</tr>
</tbody>
</table>
### TIME VEHICLES ENTERED AREA

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>9-10</td>
<td>17</td>
<td>27</td>
<td>21</td>
<td>23</td>
<td>24</td>
</tr>
<tr>
<td>10-11</td>
<td>31</td>
<td>32</td>
<td>27</td>
<td>30</td>
<td>32</td>
</tr>
<tr>
<td>11-12</td>
<td>35</td>
<td>22</td>
<td>53</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>12-1</td>
<td>36</td>
<td>31</td>
<td>51</td>
<td>38</td>
<td>39</td>
</tr>
<tr>
<td>1-2</td>
<td>31</td>
<td>31</td>
<td>20</td>
<td>33</td>
<td>41</td>
</tr>
<tr>
<td>2-3</td>
<td>36</td>
<td>35</td>
<td>33</td>
<td>24</td>
<td>34</td>
</tr>
<tr>
<td>3-4</td>
<td>28</td>
<td>37</td>
<td>26</td>
<td>19</td>
<td>25</td>
</tr>
<tr>
<td>4-5</td>
<td>32</td>
<td>24</td>
<td>21</td>
<td>29</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>246</td>
<td>239</td>
<td>252</td>
<td>216</td>
<td>247</td>
</tr>
</tbody>
</table>

### AVERAGE INFORMATION FOR EACH TYPE VEHICLE THAT ENTERED AREA

<table>
<thead>
<tr>
<th>Type Vehicle</th>
<th>Average Length of Stay</th>
<th>Average No. People</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car</td>
<td>13.8 min.</td>
<td>2.6</td>
<td>62.3</td>
<td>11.9</td>
</tr>
<tr>
<td>Car with camper trailer</td>
<td>19.3 min.</td>
<td>3.8</td>
<td>3.8</td>
<td>24.6</td>
</tr>
<tr>
<td>Car with house trailer</td>
<td>23.3 min.</td>
<td>1.7</td>
<td>1.8</td>
<td>17.6</td>
</tr>
<tr>
<td>Car with boat trailer</td>
<td>13.0 min.</td>
<td>2.8</td>
<td>0.3</td>
<td>9.3</td>
</tr>
<tr>
<td>Car with other trailer</td>
<td>7.4 min.</td>
<td>3.8</td>
<td>0.7</td>
<td>16.3</td>
</tr>
<tr>
<td>Single unit truck</td>
<td>16.5 min.</td>
<td>2.9</td>
<td>10.8</td>
<td>13.8</td>
</tr>
<tr>
<td>Truck with camper</td>
<td>19.4 min.</td>
<td>2.9</td>
<td>1.3</td>
<td>15.8</td>
</tr>
<tr>
<td>Truck with trailer</td>
<td>10.9 min.</td>
<td>3.1</td>
<td>0.8</td>
<td>11.1</td>
</tr>
<tr>
<td>Truck (commercial)</td>
<td>10.7 min.</td>
<td>1.2</td>
<td>1.3</td>
<td>8.9</td>
</tr>
<tr>
<td>Semi</td>
<td>16.2 min.</td>
<td>1.3</td>
<td>7.4</td>
<td>9.7</td>
</tr>
<tr>
<td>Motorhome</td>
<td>27.5 min.</td>
<td>3.1</td>
<td>5.2</td>
<td>25.9</td>
</tr>
<tr>
<td>Bus</td>
<td>25.5 min.</td>
<td>22.5</td>
<td>0.2</td>
<td>8.0</td>
</tr>
<tr>
<td>Other</td>
<td>21.3 min.</td>
<td>1.6</td>
<td>4.3</td>
<td>20.7</td>
</tr>
<tr>
<td></td>
<td>15.6 min.</td>
<td>2.6</td>
<td>100%</td>
<td>12.8</td>
</tr>
</tbody>
</table>

A refers to percentage of total number of vehicles using rest area
B refers to percentage of this vehicle that stopped in rest area, out of total number of vehicles that passed this rest area.

- Vehicles with Pets 5.4%
  65 vehicles containing 92 pets
- Vehicles stopping at other rest areas 56%
- Vehicles spending there vacation in Minnesota 27%
- Vehicles who's plans had been affected by the gas shortage 30%
- Vehicles on Vacation that were camping 13.5%
DEAR MOTORIST:

THE MINNESOTA DEPARTMENT OF TRANSPORTATION IS DETERMINING WHAT SHOULD BE THE SPACING OF
THE REST AREAS ALONG THE HIGHWAY AND WHAT FACILITIES THEY SHOULD PROVIDE TO SATISFY YOUR
NEEDS. ONLY YOU CAN SUPPLY INFORMATION WE NEED TO PLAN REST AREA FACILITIES. PLEASE
ANSWER THE FOLLOWING QUESTIONS.

DAY OF WEEK ___________ VEHICLE TYPE ___________ NUMBER OF PEOPLE IN

DATE ___________ TIME IN ___________ VEHICLE ___________

LICENSING STATE ___________ TIME OUT ___________

WHERE IS YOUR HOME (CITY OR COUNTY)? ___________________ (STATE) ___________

REAST AREA USE

1. WHAT WAS YOUR CHIEF PURPOSE FOR DRIVING INTO THIS REST AREA? (check only one)
   1. Use rest room  2. Dispose of sewage  3. Water
   4. Just to rest  5. Use Travel Information Board  6. Telephone
   7. Eat/Picnic  8. Dispose of refuse  9. Other (please specify)

2. HOW MANY PEOPLE IN YOUR PARTY USED THE FOLLOWING?
   Rest room facilities ___ Drinking water supply ___

3. WHICH OF THE FOLLOWING FACILITIES WERE USED BY YOUR PARTY?
   1. Picnic table  2. Travel information  3. Electrical outlet
   7. Other (Please specify) ___  8. None of these

4. DO YOU HAVE ANY PETS TRAVELING WITH YOU? ___ NUMBER ___

5. DID YOU STOP AT ANY OTHER REST AREAS THIS TRIP? YES ___ NO ___ WHERE _____________________________

IF YOU ARE CURRENTLY ON VACATION OR PARTICIPATING IN RELATED RECREATIONAL OR
SOCIAL ACTIVITIES, PLEASE COMPLETE THE FOLLOWING QUESTIONS.

1. Will you or did you spend your vacation or related time in Minnesota? Yes ___ No ___
2. If you answered "yes" to the previous question, what City or Lake did you or will you stay near? (City or Lake) _____________________________
3. Has the current gas shortage affected your vacation travels? Yes ___ No ___
   Comment _____________________________________________
4. How long are you planning on staying in Minnesota? _____________________ Days
5. Will you be camping or using campground facilities? Yes ___ No ___

REST AREA COMMENTS ____________________________________________

PLEASE RETURN TO PEOPLE AT REST AREA EXIT

THANK YOU