

Chicago Metropolitan Agency for Planning Regional Travel Survey: Lookup Table

Transportation Secure Data Center

Revised: 2016-12-05

Summary Statistics

Travel Diary	Households	
	Persons	
Vehicle GPS	Households	259
	Vehicles	408
	Days of Travel	1,790
	GPS Frequency (Hz)	1
Vehicle OBD	Households	
	Vehicles	
	Days of Travel	
	GPS Frequency (Hz)	
Wearable GPS	Households	160
	Persons	209
	Days of Travel	1,051
	GPS Frequency (Hz)	1

Blank fields indicate data is not present for this study.

Vehicle Tables

v_gpstrips

The `v_gpstrips` table contains trip-level information for each valid GPS trip detected in the GPS point data collected by the sampled households during the assigned travel day.

Name	Data Type	Comment
sampno	numeric	Household identifier
vehno	smallint	Vehicle identifier
gpstripid	integer	Trip number within file
gpstravdayid	smallint	Travel day within travel period (1- Sunday, 7- Saturday)
gpstravdaytripid	smallint	Trip number within travel day (restarts at 1 each day)
start_time	timestamp without time zone	Local date and time of trip start
end_time	timestamp without time zone	Local date and time of trip end
duration_min	double precision	Duration of trip (in minutes)
distance_miles	double precision	Distance covered during trip (in miles)
avg_speed_mph	double precision	Average speed (MPH)
max_speed_mph	double precision	Max speed (MPH)

origin_lon*	double precision	Starting longitude (dd WGS84) of trip
origin_lat*	double precision	Starting latitude (dd WGS84) of trip
destination_lon*	double precision	Ending longitude (dd WGS84) of trip
destination_lat*	double precision	Ending latitude (dd WGS84) of trip
geom*	geometry	A line representation created by NREL to represent that path of travel for the trip. points are grouped using the start and end GPS timestamps, and ordered to create a line (WGS84, 4326)

v_households

The v_households table includes data from the households who participated in the vehicle GPS part of the study (a subset of the total households who participated in the study).

Name	Data Type	Comment
sampno	numeric	Household identifier
assn	integer	Assigned travel date
depl_duration	integer	Length of deployment period
gps_trips_td	double precision	Number of GPS trips on assigned travel date
gps_trips_27	double precision	Number of GPS trips on days 2-7
cati_trip_count	double precision	Total of all instrumented vehicle CATI trips
gps_complete	integer	GPS data exists for all instrumented vehicles or CATI confirms no travel vehicles on assigned travel date
gps_partial	integer	GPS data exists for some but not all instrumented vehicles on assigned travel date
cati_complete	integer	CATI data was retrieved for this household
gps_diary_complete	integer	Both GPS and CATI are complete
traveldatediscrepancy	integer	Final GPS and CATI travel dates not in synch
prsent	integer	Prompted recall materials sent to household
prreturend	integer	Prompted recall information received from household
geom*	geometry	Point grabbed from place table where place name = Home

v_vehicles

The v_vehicles table is an NREL-generated table that establishes a unique vehicle identifier. Since geometries have been removed from the public download, this table is not available in a cleansed download version.

Name	Data Type	Comment
sampno	numeric	Household identifier
vehno	smallint	Vehicle identifier
geom*	geometry	Geometric point data

v_place

The v_place table contains all reported vehicle travel locations for all vehicle households. This table matches a participants CATI data with GPS data.

Name	Data Type	Comment
sampno	numeric	Household identifier
vehno	smallint	Vehicle identifier
plano	smallint	Place number (from CATI)
place_name*	character varying	Name of place
place_type	smallint	Place type: 1- Home, 2- Primary workplace, 3- School, 4- Bus stop/train station, 5- Other (specify)
address*	character varying	Address of place
city	character varying	City of place
lon*	double precision	Longitude of place
lat*	double precision	Latitude of place
gpsplaceid	integer	Place number (from GPS)
arr_time	timestamp without time zone	Date-time of arrival according to diary
arr_gpstime	timestamp without time zone	Date-time of arrival according to GPS
arr_lon*	double precision	Longitude of last GPS point before arrival
arr_lat*	double precision	Latitude of last GPS point before arrival
arr_match_type	smallint	Match type of incoming trips destination: If blank/null- First place of the day, 1- Matched by time or distance, 2- Matched by an analyst
dep_time	timestamp without time zone	Date-time of departure according to diary
dep_gpstime	timestamp without time zone	Date-time of departure according to GPS
dep_lon*	double precision	Longitude of first GPS point after departure
dep_lat*	double precision	Latitude of first GPS point after departure
dep_match_type	smallint	Match type of outgoing trips origin: If blank/null- First place of the day, 1- Matched by time or distance, 2- Matched by an analyst
geom*	geometry	Point representation of the place. Generated from the place lat/lon coordinate values in the table (WGS 4326). Origin/destination or arrival/departure points are available but not represented as geometries in this table

v_points

The v_points table contains all valid GPS points (associated with GPS trips) collected by the sampled vehicle GPS households during the assigned travel day. All higher level tables (households, persons, trips, etc.) are derived from point tables. For public download, the v_points data is segregated by vehicle and available in the sorted_by_vehicle.zip file. Thus, the v_points table is not available in the full_survey.zip download. This decision was made to better organize the data and manage file sizes.

Name	Data Type	Comment
sampno	numeric	Unique household identifier
vehno	smallint	Original study vehicle identifier
gpstripid	integer	Trip identifier
gpstripdayid	smallint	Trip number within file

gpstravdaytripid	smallint	Trip number within travel day
localid	integer	Point identifier
time_local	timestamp without time zone	Local timestamp
longitude*	double precision	Longitude recorded by the GPS device
latitude*	double precision	Latitude recorded by the GPS device
gpsspeed	double precision	Speed (in MPH)
nbsat	integer	Number of satellites used to compute position
hdop	double precision	HDOP of computed position
geom*	geometry	Geometric point data

Wearable Tables

w_gpstrips

The w_gpstrips table contains trip results from the wearable GPS subsample. The table also contains trip summary information derived from GPS data during the assigned travel day.

Name	Data Type	Comment
sampno	numeric	Household identifier
perno	smallint	Person identifier
gpstripid	integer	Trip number within file
gpstravdayid	smallint	Travel day within travel period (1- Sunday, 7- Saturday)
gpstravdaytripid	smallint	Trip number within travel day (Restarts at 1 am each day)
start_time	timestamp without time zone	Local date and time of trip start
end_time	timestamp without time zone	Local date and time of trip end
duration_min	double precision	Duration of trip (in minutes)
distance_miles	double precision	Distance covered during trip (in miles)
avg_speed_mph	double precision	Average speed (MPH)
max_speed_mph	double precision	Max speed (MPH)
origin_lon*	double precision	Longitude (dd WGS84) of trip origin
origin_lat*	double precision	Latitude (dd WGS84) of trip origin
destination_lon*	double precision	Longitude (dd WGS84) of trip destination
destination_lat*	double precision	Latitude (dd WGS84) Of trip destination
geom*	geometry	A line representation created by NREL to represent the path of travel for the Trip. Points are grouped using the start and end GPS timestamps, and ordered to create a line (WGS84, 4326).

w_place_nr

The w_place_nr table contains results from the households participating in the wearable study for which prompted recall information was received. The table includes records for places visited, identified by the GPS, where no match was made.

Name	Data Type	Comment
sampno	numeric	Household identifier
perno	smallint	Person identifier
gpsplaceid	integer	Place number (from GPS)
place_name*	character varying	Name of place
activity	character varying	Activity
activity_other	character varying	Other activity (may be set even if activity is not other)
arr_mode	smallint	Mode, or 0 if unspecified (incoming trip)
arr_mode_other	character varying	Mode if other (incoming trip)
dep_mode	smallint	Mode, or 0 if unspecified (outgoing trip)
dep_mode_other	character varying	Mode if other (outgoing trip)
arr_hh_members	smallint	Number of household members including respondents that travelled together, or 0 if unspecified (incoming trip)
dep_hh_members	smallint	Number of household members including respondent that travelled together, or 0 if unspecified (outgoing trip)
reason_not_reported	smallint	Reason stop was not reported
reason_not_other	character varying	Reason, if other

w_points

The w_points table contains all valid GPS points (associated with GPS trips) collected by the sampled wearable GPS households during the assigned travel day. All higher level tables (households, persons, trips, etc.) are derived from point tables. For public download, the w_points data is segregated by person and available in the sorted_by_person.zip file. Thus, the w_points table is not available in the full_survey.zip download. This decision was made to better organize the data and manage file sizes.

Name	Data Type	Comment
sampno	numeric	Unique household identifier
perno	smallint	cmap Study Person Identifier. Unique IS sampno
gpstripid	integer	Trip identifier
gpstripdayid	smallint	Trip number within file
gpstravdaytripid	smallint	Trip number within travel day
localid	integer	Point identifier
time_local	timestamp without time zone	Local timestamp
longitude*	double precision	Longitude recorded by the GPS device
latitude*	double precision	Latitude recorded by the GPS device
gpspeed	double precision	Speed (in MPH)
nbsat	integer	Number of satellites used to compute position
hdop	double precision	HDOP of computed position
geom*	geometry	Geometric point data

w_person

The w_person table is an NREL-generated table that establishes a unique person identifier. Since geometries have been removed from the public download, this table is not available in a cleansed download version.

Name	Data Type	Comment
sampno	numeric	Household identifier
perno	smallint	Person identifier
geom*	geometry	Geometric point data

w_place

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lon*	double precision	Longitude of place
lat*	double precision	Latitude of place
place_type	smallint	Place type: 1- Home, 2- Primary workplace, 3- School, 4- Bus stop/train station, 5- Other (specify)
gpsplaceid	smallint	Place number (from GPS)
dep_time	timestamp without time zone	Date-time of departure according to diary
dep_gpstime	timestamp without time zone	Date-time of departure according to gps
dep_lon*	double precision	Longitude of first GPS point after departure
dep_lat*	double precision	Latitude of first GPS point after departure
dep_match_type	smallint	match type of outgoing trips origin: Blank/Null- First place of the day, 1- Matched by time or distance, 2- Matched by an analyst
arr_time	timestamp without time zone	Date-time of arrival according to diary
arr_gpstime	timestamp without time zone	Date-time of arrival according to GPS
arr_lon*	double precision	Longitude of last GPS point before arrival
arr_lat*	double precision	Latitude of last GPS point before arrival
arr_match_type	smallint	Match type of incoming trips destination: If Blank/Null- First place of the day, 1- Matched by time or distance, 2- Matched by an analyst
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prsent	integer	Prompted recall materials sent to household
prreturend	integer	Prompted recall information received from household
geom*	geometry	Point grabbed from place table where place name = Home

Sorted by Vehicle Tables

gps_vehicles

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sampno	numeric	Household identifier
vehno	smallint	Vehicle identifier

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assn	integer	Assigned travel date
depl_duration	integer	Length of deployment period

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gps_points

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gpstravdaytripid	smallint	Trip number within travel day
localid	integer	Point identifier
time_local	timestamp without time zone	Local timestamp
gpsspeed	double precision	Speed (in MPH)
nbsat	integer	Number of satellites used to compute position
hdop	double precision	HDOP of computed position

Sorted by Person Tables

gps_households

The w_households table includes data from the households who participated in the wearable GPS part of the study (a subset of the total households who participated in the study).

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sampno	numeric	Household identifier

assn	integer	Assigned travel date
depl_duration	integer	Length of deployment period
gps_trips_td	double precision	Number of GPS trips on assigned travel date
gps_trips_27	double precision	Number of GPS trips on days 2-7
cati_trip_count	double precision	Total of all instrumented vehicle CATI trips
gps_complete	integer	GPS data exists for all instrumented vehicles or CATI confirms no travel vehicles on assigned travel date
gps_partial	integer	GPS data exists for some but not all instrumented vehicles on assigned travel date
cati_complete	integer	CATI data was retrieved for this household
gps_diary_complete	integer	Both GPS and CATI are complete
traveldatediscrepancy	integer	Final GPS and CATI travel dates not in synch
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person

The w_person table is an NREL-generated table that establishes a unique person identifier. Since geometries have been removed from the public download, this table is not available in a cleansed download version.

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sampno	numeric	Household identifier
perno	smallint	Person identifier

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Name	Data Type	Comment
sampno	numeric	Unique household identifier
perno	smallint	cmap Study Person Identifier. Unique IS sampno
gpstripid	integer	Trip identifier
gpstripdayid	smallint	Trip number within file
gpstravdaytripid	smallint	Trip number within travel day
localid	integer	Point identifier
time_local	timestamp without time zone	Local timestamp
gpsspeed	double precision	Speed (in MPH)
nbsat	integer	Number of satellites used to compute position
hdop	double precision	HDOP of computed position

gps_trips

The w_gpstrips table contains trip results from the wearable GPS subsample. The table also contains trip summary information derived from GPS data during the assigned travel day.

Name	Data Type	Comment
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perno	smallint	Person identifier
gpstripid	integer	Trip number within file
gpstravdayid	smallint	Travel day within travel period (1- Sunday, 7- Saturday)
gpstravdaytripid	smallint	Trip number within travel day (Restarts at 1 am each day)
start_time	timestamp without time zone	Local date and time of trip start
end_time	timestamp without time zone	Local date and time of trip end
duration_min	double precision	Duration of trip (in minutes)
distance_miles	double precision	Distance covered during trip (in miles)
avg_speed_mph	double precision	Average speed (MPH)
max_speed_mph	double precision	Max speed (MPH)

* Indicates that the column has been redacted from cleansed data sets available at www.nrel.gov/tsdc. It has been determined that the column contains sensitive data that must be viewed within the TSDC's secure portal environment.

Note: When necessary, a series of lookup tables was provided in the database to identify the meanings of certain integer-represented responses to survey questions.

How to Cite the TSDC:

If you use TSDC data in a publication, please send a notification to tsdc@nrel.gov and include a citation that is consistent with the following format in your publication:

"Transportation Secure Data Center" (2016). National Renewable Energy Laboratory. *[Date TSDC data was accessed]*. www.nrel.gov/tsdc.