2014 Southern Nevada Household Travel Survey: Lookup Table

Transportation Secure Data Center

Revised: 2016-12-05

Summary Statistics

Travel Diary	Households	7,072
	Persons	
Vehicle GPS	Households	
	Vehicles	
	Days of Travel	
	GPS Frequency (Hz)	
Vehicle OBD	Households	
	Vehicles	
	Days of Travel	
	GPS Frequency (Hz)	
Wearable GPS	Households	1,168
	Persons	1,694
	Days of Travel	4,121
	GPS Frequency (Hz)	1

Blank fields indicate data is not present for this study.

Survey Tables

survey_households

The survey_households table contains information from households who completed the travel diary survey. Of the households who completed the survey, a smaller portion also contain GPS travel data.

Name	Data Type	Comment
sampno	numeric	Household identifier
tripdate	timestamp without time zone	Date of travel
travday	double precision	Numbered day on which travel occurred
ctyfips	text	Corresponding Federal Information Processing Series (FIPS) code
hhsiz	integer	Household size
hhsizx	integer	N/A
hhchild	integer	Number of children in the household
hhworker	integer	Number of workers in the household
hhstud	integer	Number of students in the household
hhinc	integer	Household income (requires lookup table coming soon)
hhinc2	integer	Second household income (requires lookup table coming soon). NULL if no second income

hhveh	integer	Number of vehicles in the household
bikes	integer	Number of bicycles in the household
hhlicdrv	integer	Number of household members with a drivers license
finalgflag	integer	N/A
futuresurveys	integer	N/A
recmode	integer	Recruit mode (1 CATI, 2 WEB)
retmode	integer	Retrieval mode (1 CATI, 2 WEB, 3 Mail back)
hhtrips	integer	Number of recorded household trips
hhrkwt0	double precision	Household weight

Wearable Tables

w_households

The w_households table includes data from the unique households that participated in the wearable GPS portion of the study. Of the total wearable households, a smaller portion of households are linked to a diary portion of the study.

Name	Data Type	Comment
sampno	numeric	Household identifier
totnumper	smallint	Total number of persons reported per household
numgpsper	smallint	Total number of persons deployed with GPS devices
tday1	timestamp without time zone	Assigned travel date for log completion
totalgpstripstd	smallint	Number of GPS trips on assigned travel date
totalgpstrips23	smallint	Number of GPS trips on days 2-3
totallogtripstd	smallint	Total of all log trips on assigned travel date
gpscomplete	smallint	GPS data exists for all instrumented persons (or for at least 2 persons in ¿= 3 person households) or CATI confirms no travel on assigned travel date
logcomplete	smallint	Log data (survey) was retrieved for this household
gpslogcomplete	smallint	Both GPS and log (survey) status are complete
controlcode	smallint	Final GPS household disposition
geom*	geometry	Point grabbed from place table where place name = Home

w_points

The w_points table contains all valid GPS points (associated with GPS trips) collected by the sampled wearable households during the assigned travel day. All higher-level tables (households, person, 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	Household identifier
perno	smallint	Person identifier
gpstripid	smallint	Trip number within file
gpstravdayid	smallint	Travel day within deployment period (n = 1 to 3)
localid	integer	Point index within original file
time_local	timestamp without time zone	Local timestamp
longitude*	double precision	Longitude (dd WGS84) of point
latitude*	double precision	Latitude (dd WGS84) of point
gpsspeed	double precision	GPS speed (in MPH)
heading	double precision	Compass direction of travel in degrees (Values from 0 to 359)
geom*	geometry	GPS point data

w_tripsort

The w_tripsort table contains only persons whose log data was able to be matched to GPS data, or whose log data confirmed no travel on the travel day.

Name	Data Type	Comment
sampno	numeric	Household identifier
perno	smallint	Person identifier
trip	text	Log trip (in case of vehicle trips, aggregated from personal diaries)
startplace*	text	Name of origin
endplace*	text	Name of destination
startgpsplaceid	integer	GPS place ID of the starting place, can be joined (with sampno and persno) to LogGPSTMs gpsplaceid for details on the starting place (you may get duplicates but they will be identical on GPS fields)
endgpsplaceid	integer	GPS place ID of the ending place, can be joined (with sampno and persno) to LogGPSTMs gpsplaceid for details on the ending place (you may get duplicates but they will be identical on GPS fields)
newgpslist	text	New GPS places found within log trip that are not accounted for in the log (comma-separated list of places)

w_gpstrips

The w_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
perno	smallint	Person identifier
gpstripid	smallint	Trip number within file
gpstravdayid	smallint	Travel day within travel week (n = 1 to 3)

gpstravdaytripid	smallint	Trip number within travel day (restarts at 1 each day)
starttime	timestamp without time zone	Local date and time of trip start
endtime	timestamp without time zone	Local date and time of trip end
duration	double precision	Duration of trip (in minutes)
distance_miles	double precision	Distance covered during trip (in miles)
euclideandistance	double precision	Straight line distance in miles from the first GPS point to the last GPS point of the trip
avgspeed	double precision	Average speed (in MPH)
avggpsspeed	double precision	Average speed of all points within trip (in MPH)
maxspeed	double precision	Maximum speed (in MPH)
travmodeid	smallint	Imputed travel mode (if single mode or stage, then mode code, if multimode, then longest distance traveled mode)
nbstages	smallint	Number of trip stages (each stage is change in travel mode)
travmodelist	text	Comma-delimited sequence of travel modes (in usage order)
numuniqmodes	smallint	Count of unique modes
uniqmodelist	text	Comma-delimited instances of unique modes (in numeric order)
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
distfromlastdest	double precision	Distance between previous trip destination and current trip origin (feet). Null where distance ¿ 500 meters
gaptime	double precision	Time between previous trip/stage destination and current trip/stage origin (in minutes)
tripareatype	smallint	1 = Internal Origin, Internal Destination; 2 = Internal Origin, External Destination; 3 = External Origin, Internal Destination; 4 = External Origin, External Destination, Area defined by Clark County, NV
workrelated	smallint	1 = Trip suspected to be work-related, 0 = otherwise
nontransport	smallint	1 = Trip suspected to be a non-transportation trip, 0 = otherwise
onsite	smallint	1 = Trip appears to be within the boundaries of a single location, 0 = otherwise
looptrip	smallint	1 = Trip starts and ends at same location, 0 = otherwise
originloctype	text	Home, Work, School, Other (based on matched trip end or proximity to geocoded habitual location)
destloctype	text	Home, Work, School, Other (based on matched trip end or proximity to geocoded habitual location)
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 are ordered to create a line (WGS84, 4326).

w_person

The w_person table was generated by NREL to establish a persons primary key (sampno + perno) for the wearable sample.

Name	Data Type	Comment

sampno	numeric	Household identifier
perno	smallint	Person identifier
logtripsday1	smallint	Number of all trips reported on day 1 of deployment period
gpstripsday1	smallint	Number of GPS trips collected on day 1 of deployment period
gpstripsday2	smallint	Number of GPS trips collected on day 2 of deployment period
gpstripsday3	smallint	Number of GPS trips collected on day 3 of deployment period
totalgpstrips	smallint	Total number of GPS trips collected during the 3-day deployment period
geom*	geometry	Geometric point data representing a persons home location

w_gpstripstages

The w_gpstripstages table divides wearable GPS trip data into mode of transportation and summarizes each division.

Name	Data Type	Comment
sampno	numeric	Household identifier
perno	smallint	Person identifier
gpstripid	smallint	Trip number within file
gpstravdayid	smallint	Travel day within travel week (n = 1 to 3)
gpstravdaytripid	smallint	Trip number within travel day (restarts at 1 each day)
stageid	smallint	Stage number within a trip
starttime	timestamp without time zone	Local date and time of trip start
endtime	timestamp without time zone	Local date and time of trip end
duration	double precision	Duration of trip stage (in minutes)
tripdistance	double precision	Distance covered during trip stage (in miles)
euclideandistance	double precision	Straight line distance from the first GPS point to the last GPS point of the trip stage (in miles)
avgspeed	double precision	Average speed (in MPH)
avggpsspeed	double precision	Average speed of all points within trip stage (in MPH)
maxspeed	double precision	Maximum speed during trip stage (in MPH)
origin_lon*	double precision	Starting longitude (dd WGS84) of trip stage
origin_lat*	double precision	Starting latitude (dd WGS84) of trip stage
destination_lon*	double precision	Ending longitude (dd WGS84) of trip stage
destination_lat*	double precision	Ending latitude (dd WGS84) of trip stage
distfromlastdest	double precision	Distance between previous trip stage destination and current trip stage origin (feet). Null where distance ¿ 500 meters
gaptime	double precision	Time between previous trip stage destination and current trip stage origin (in minutes)
geom*	geometry	A line representation created by NREL to represent the path of travel for the trip stage. Points are grouped using the start and end GPS timestamps and are ordered to create a line (WGS84, 4326).

w_place

The w_place table contains all diary-reported trips by persons for all households. This table contains only persons whose diary data were able to be matched to GPS data or whose diary data confirmed no travel on the travel day.

Name	Data Type	Comment
sampno	numeric	Unique household identifier
perno	smallint	Person identifier
gpsplaceid	smallint	Place Number (from GPS). The GPS trip departing from a gpsplaceid will have the same ID and the GPS trip arriving to the gpsplaceid will have an ID one less (i.e. gpsplaceid 2 will have gpstripid 1 arriving to it and gpstripid 2 departing from it). The first gpsplaceid is the place where the first GPS trip starts and the last gpsplaceid is the place where the last GPS trip ends
placeno	smallint	Place number (from log)
arrmatchtype	text	Match type of incoming trips destination
depmatchtype	text	Match type of outgoing trips origin
name*	text	Name of place
addr*	text	Address of place
city	text	City of place
longitude*	double precision	Longitude of place
latitude*	double precision	Latitude of place
arrgpslongitude*	double precision	Longitude of last GPS point before arrival
arrgpslatitude*	double precision	Latitude of last GPS point before arrival
depgpslongitude*	double precision	Longitude of first GPS point after departure
depgpslatitude*	double precision	Latitude of first GPS point after departure
distance	double precision	Distance between GPS trip end and log trip end (in feet)
arrtime	timestamp without time zone	Time of arrival according to log (survey)
deptime	timestamp without time zone	Time of departure according to log (survey)
gpsarrtime	timestamp without time zone	Time of arrival according to GPS
gpsdeptime	timestamp without time zone	Time of departure according to GPS
logloctype	text	Home, Work, School, Other
gpsloctype	text	Home, Work, School, Other
geom*	geometry	Geometric point data where point represents the location of place

w_missedtrips

The w_missedtrips table contains aggregate values (sorted by person) indicating the accuracy of survey responses when compared to wearable GPS data.

Name	Data Type	Comment
sampno	numeric	Household identifier
perno	smallint	Person identifier
gpslogcomplete	smallint	Both GPS and log (survey) status are complete
nbgpstripslogday	smallint	Number of trips captured by GPS on the travel day
nblogreportedtrips	smallint	Number of trips reported by log (survey) on this travel day

rawmatchdifference	smallint	Equal to: nbgpstripslogday - nblogreportedtrips
nbmissinggpstrips	smallint	Number of trips reported by log that are not in GPS data
nbmissinglogtrips	smallint	Number of trips captured by GPS, not in log data

Sorted by Person Tables

gps_households

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controlcode	smallint	Final GPS household disposition

person

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destloctype	text	Home, Work, School, Other (based on matched trip end or proximity to geocoded habitual location)

* 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.