Metropolitan Council Travel Behavior Inventory: Lookup Table

Transportation Secure Data Center

Revised: 2016-12-05

Summary Statistics

Travel Diary	Households	10,362
	Persons	21,298
Vehicle GPS	Households	
	Vehicles	
	Days of Travel	
	GPS Frequency (Hz)	
Vehicle OBD	Households	
	Vehicles	
	Days of Travel	
	GPS Frequency (Hz)	
Wearable GPS	Households	164
	Persons	278
	Days of Travel	2,303
	GPS Frequency (Hz)	1

Blank fields indicate data is not present for this study.

Survey Tables

survey_place

The survey_place table contains trip-level responses from the diaries of the sampled households during the assigned travel day. In this case, the place table is the equivalent of a trip table (with the origin and destination defined) but with the addition of activity. The origin and destination are defined, but the path of travel is unknown.

Name	Data Type	Comment
studytype	character varying	Participation in HIS or GPS subsample (0= GPS, 1= HIS).
recruitmode	character varying	Method of recruitment (-1= Not Yet Retrieved, 0= INAP, 1= Phone, 2= Web).
retrievemode	character varying	Method of Retrieval (-1= Not Yet Retrieved, 0= INAP, 1= Phone, 2= Web, 3= Mail, 4= Multiple modes).
sampno	numeric	Household identifier
perno	smallint	Person identifier
hhpersonid	integer	Household person identifier
hhcomp	integer	Completed Household (0= Not Completed, 1= HIS Completed, 2= GPS Completed).
tripnum	smallint	Number of Trip (-1= Not yet assigned, Range: 1-11 Trips).

tripid	numeric	Household Persons Trip ID (0= Not yet Assigned).
starttravel	character varying	Location Status at 3:00 AM (-1= Not yet Retrieved, 0= INAP, 1= Traveling, 2= At a Location).
origin_city	character varying	Origin city
origin_state	character varying	Origin state
origin_zip	character varying	Origin zip code
origin_lat*	double precision	Origin latitude
origin_lon*	double precision	Origin longitude
origin_loc_type	character varying	Origin Type of Location (-1= Not Yet Retrieved, 0= INAP, 100= Home, 200= Primary Workplace, 300= Secondary Workplace, 400= School, 501= Residential, 502= Residential-Other, 503= Automotive Dealer/Repair, 504= Bank/Financial Institution, 505= Barber/Beauty/Nail Salon, 506= Book Store/Library/Newsstand, 507= Construction Site, 508= Convenience/Drug Store, 509= Daycare Facility/Preschool/Nursery School, 510= Gas Station, 511= Government/Municipal/City Offices, 512= Grocery, 513= Hotel/Motel/Other Lodging Facility, 514= Indoor Recreation - Gym/Health Club/ Skating Rink, 515= Industrial Site, 516=Medical Facility/Hospital, 517=Movie Theater/Theatre/Concert Venue/Sports Arena, 518=Museum/Zoo/Historic Site, 519=Office Building, 520=Outdoor Recreation - Park/Athletic Field/Beach, 521=Religious - Church/Synagogue/Houses of Worship, 522=Restaurant/Fast Food/Bar & Grill, 523=School - K-12, 524=School - College/University/Technical/Vocational, 525=Shopping Mall/Department Store, 526=Transportation Terminal (Airport/Train/Bus), 996=Other, 998=Dont Know, 999=Refused).
origin_type_other	character varying	Other type of origin location
origin_loc_act1	character varying	Primary Activity at Origin Location (-1= Not Yet Retrieved, 0= INAP, 1= Home Paid Work, 2= Home Unpaid Work, 3= Home Other,4= Work, 5= Attend Childcare, 6= Attend School, 7= Attend College, 8= Other School Activities, 9= Quick Stops, 10= Personal Business, 11= Major Shopping, 12= Everyday Shopping, 13= Social, 14= Recreation Participate, 15= Recreation Watch, 16= Eat Out, 17= Religious/ Community, 18= Accompany Another Person, 19= Pick-Up Passenger, 20= Drop-Off Passenger, 21= Turn Around, 96= Other, 97 No Other Activity).
origin_loc_act2	character varying	2nd Activity at Origin Location (-1= Not Yet Retrieved, 0= INAP, 1= Home Paid Work, 2= Home Unpaid Work, 3= Home Other,4= Work, 5= Attend Childcare, 6= Attend School, 7= Attend College, 8= Other School Activities, 9= Quick Stops, 10= Personal Business, 11= Major Shopping, 12= Everyday Shopping, 13= Social, 14= Recreation Participate, 15= Recreation Watch, 16= Eat Out, 17= Religious/ Community, 18= Accompany Another Person, 19= Pick-Up Passenger, 20= Drop-Off Passenger, 21= Turn Around, 96= Other, 97= No Other Activity).
origin_loc_act3	character varying	3rd Activity at Origin Location (-1= Not Yet Retrieved, 0= INAP, 1= Home Paid Work, 2= Home Unpaid Work, 3= Home Other,4= Work, 5= Attend Childcare, 6= Attend School, 7= Attend College, 8= Other School Activities, 9= Quick Stops, 10= Personal Business, 11= Major Shopping, 12= Everyday Shopping, 13= Social, 14= Recreation Participate, 15= Recreation Watch, 16= Eat Out, 17= Religious/ Community, 18= Accompany Another Person, 19= Pick-Up Passenger, 20= Drop-Off Passenger, 21= Turn Around, 96= Other, 97= No Other Activity).

origin_loc_act4	character varying	4th Activity at Origin Location (-1= Not Yet Retrieved, 0= INAP, 1= Home Paid Work, 2= Home Unpaid Work, 3= Home Other, 4= Work, 5= Attend Childcare, 6= Attend School, 7= Attend College, 8= Other School Activities, 9= Quick Stops, 10= Personal Business, 11= Major Shopping, 12= Everyday Shopping, 13= Social, 14= Recreation Participate, 15= Recreation Watch, 16= Eat Out, 17= Religious/ Community, 18= Accompany Another Person, 19= Pick-Up Passenger, 20= Drop-Off Passenger, 21= Turn Around, 96= Other, 97= No Other Activity).
lvloctime	character varying	Time of Location Departure (-1= Not yet Retrieved, 8888= INAP, Range: 0000- 2459, 9997= Did Not Leave Location, 9998= Dont Know/Remember, 9999= Refused).
transtype1	character varying	1st Type of Transportation Used (-1= Not yet Retrieved, 0= INAP, 1= Car/Van/Truck, 2= Walk, 3= School Bus, 4= Public Bus, 5= Light Rail (ex: Hiwatha Line), 6= Commuter Rail (ex: Northstar), 7= Amtrak, 8= Bicycle, 9= Motorcycle/Moped, 10= Taxi/Shuttle, 11= Dial-A-Ride, 12= Private Bus, 13= Boat/Ferry Boat/Kayak, 14= Skateboard/Scooter, 15= Airplane, 16= Tractor, 17= Golf Cart, 18= Ambulance, 19= ATV, 20= Funeral Home Limousine, 21= Rollerblades/Rollerskates, 22= Baby Stroller/Stroller, 23= Wheel Chair/Power Chair, 24= Snowmobile, 96= Other, 97= None).
transtype2	character varying	2nd Type of Transportation Used (-1= Not yet Retrieved, 0= INAP, 1= Car/Van/Truck, 2= Walk, 3= School Bus, 4= Public Bus, 5= Light Rail (ex: Hiwatha Line), 6= Commuter Rail (ex: Northstar), 7= Amtrak, 8= Bicycle, 9= Motorcycle/Moped, 10= Taxi/Shuttle, 11= Dial-A-Ride, 12= Private Bus, 13= Boat/Ferry Boat/Kayak, 14= Skateboard/Scooter, 15= Airplane, 16= Tractor, 17= Golf Cart, 18= Ambulance, 19= ATV, 20= Funeral Home Limousine, 21= Rollerblades/Rollerskates, 22= Baby Stroller/Stroller, 23= Wheel Chair/Power Chair, 24= Snowmobile, 96= Other, 97= None).
transtype3	character varying	3rd Type of Transportation Used (-1= Not yet Retrieved, 0= INAP, 1= Car/Van/Truck, 2= Walk, 3= School Bus, 4= Public Bus, 5= Light Rail (ex: Hiwatha Line), 6= Commuter Rail (ex: Northstar), 7= Amtrak, 8= Bicycle, 9= Motorcycle/Moped, 10= Taxi/Shuttle, 11= Dial-A-Ride, 12= Private Bus, 13= Boat/Ferry Boat/Kayak, 14= Skateboard/Scooter, 15= Airplane, 16= Tractor, 17= Golf Cart, 18= Ambulance, 19= ATV, 20= Funeral Home Limousine, 21= Rollerblades/Rollerskates, 22= Baby Stroller/Stroller, 23= Wheel Chair/Power Chair, 24= Snowmobile, 96= Other, 97= None).
transtype_o	character varying	Other type of transportation used
usepass	character varying	Used Pass for Trip (-1= Not yet Retrieved, 0= INAP, 1= Yes, 2= No, 98= Dont know, 99= Refused).
paypass	character varying	Amount of money paid for transit trip (-1= Not yet Retrieved, 0= INAP, 998= Dont Know, 999= Refused).
trvlocdr	character varying	Driver or Passenger (-1= Not yet Retrieved, 0= INAP, 1= Driver, 2= Passenger, 98= Dont Know, 99= Refused).
trvveh	character varying	Household Vehicle Used for Trip (-1= Not Yet Retrieved, 0= INAP, 1= Yes, 2= No, 98= Dont Know, 99= Refused).
toll_use	character varying	Toll Used for Trip (-1= Not yet Retrieved, 0= INAP, 1= Yes, 2= No, 98= Dont Know, 99= Refused).
parkpay	character varying	Pay for Parking (-1= Not Yet Retrieved, 0= INAP, 99997= Did not pay, 99998= Dont Know/Remember, 99999= Refused).
parkrate	character varying	Parking Rate (-1= Not Yet Retrieved, 0= INAP, 1= Hourly, 2= Daily, 3= Monthly, 4= Annually, 5= Bi-Weekly, 6= Per Semester, 7= One Time Rate, 8= Quarterly, 9= Meter, 96= Other, 98= Dont Know, 99= Refused).

parkrate_o	smallint	Other parking rate
trvps	character varying	Number of Additional People on Trip (Including Yourself) (-1= Not yet Retrieved, 0= INAP, Range: 1- 250 Persons, 98= Dont Know, 99= Refused).
trvhhps	character varying	Number of Household Members on Trip (Including Yourself) (-1= Not Yet Retrieved, 0= INAP, Range: 1- 250 Persons, 998= Dont Know, 999= Refused).
trvhhps_1	smallint	1st Household Member in Vehicle (Person ID Range: 1-10).
trvhhps_2	smallint	2nd Household Member in Vehicle (Person ID Range: 1-10).
trvhhps_3	smallint	3rd Household Member in Vehicle (Person ID Range: 1-10).
trvhhps_4	smallint	4th Household Member in Vehicle (Person ID Range: 1-10).
arr_time	integer	Time of Arrival - Hour/Minute Military Time (-1= Not yet Retrieved, 8888= INAP).
dep_city	character varying	Destination city
destination_state	character varying	Destination state
destination_zip	character varying	Destination zip code
destination_lat*	double precision	Destination latitude
destination_lon*	double precision	Destination longitude
destination_loc_type	character varying	Destination Type of Location (-1= Not yet Retrieved, 0= INAP, 100= Home, 200= Primary Workplace, 300= Secondary Workplace, 400= School, 501= Residential, 502= Residential-Other, 503= Automotive Dealer/Repair, 504= Bank/Financial Institution, 505= Barber/Beauty/Nail Salon, 506= Book Store/Library/Newsstand, 507= Construction Site, 508= Convenience/Drug Store, 509= Daycare Facility/Preschool/Nursery School, 510= Gas Station, 511= Government/Municipal/City Offices, 512= Grocery, 513= Hotel/Motel/Other Lodging Facility, 514= Indoor Recreation - Gym/Health Club, Skating Rink, 515= Industrial Site, 516= Medical Facility/Hospital, 517= Movie Theater/Theatre/Concert Venue/Sports Arena, 518= Museum/Zoo/Historic Site, 519= Office Building, 520= Outdoor Recreation - Park, Athletic Field, Beach, 521= Religious - Church/Synagogue/Houses of Worship, 522= Restaurant/Fast Food/Bar & Grill, 523= School - K-12, 524= School - College/University/Technical/Vocational, 525= Shopping Mall/Department Store,526= Transportation Terminal (Airport/Train/Bus), 96= Other, 998= Dont Know, 999= Refused).
destination_type_other	character varying	Other-Destination location type
destination_loc_act1	character varying	Primary Activity at Destination (-1= Not Yet Retrieved, 0= INAP, 1= Home Paid Work, 2= Home Unpaid Work, 3= Home Other,4= Work, 5= Attend Childcare, 6= Attend School, 7= Attend College, 8= Other School Activities, 9= Quick Stops, 10= Personal Business, 11= Major Shopping, 12= Everyday Shopping, 13= Social, 14= Recreation Participate, 15= Recreation Watch, 16= Eat Out, 17= Religious/ Community, 18= Accompany Another Person, 19= Pick-Up Passenger, 20= Drop-Off Passenger, 21= Turn Around, 96= Other, 97 No Other Activity).
destination_loc_act2	character varying	2nd Activity at Destination (-1= Not Yet Retrieved, 0= INAP, 1= Home Paid Work, 2= Home Unpaid Work, 3= Home Other,4= Work, 5= Attend Childcare, 6= Attend School, 7= Attend College, 8= Other School Activities, 9= Quick Stops, 10= Personal Business, 11= Major Shopping, 12= Everyday Shopping, 13= Social, 14= Recreation Participate, 15= Recreation Watch, 16= Eat Out, 17= Religious/ Community, 18= Accompany Another Person, 19= Pick-Up Passenger, 20= Drop-Off Passenger, 21= Turn Around, 96= Other, 97 No Other Activity).

destination_loc_act3	character varying	3rd Activity at Destination (-1= Not Yet Retrieved, 0= INAP, 1= Home Paid Work, 2= Home Unpaid Work, 3= Home Other,4= Work, 5= Attend Childcare, 6= Attend School, 7= Attend College, 8= Other School Activities, 9= Quick Stops, 10= Personal Business, 11= Major Shopping, 12= Everyday Shopping, 13= Social, 14= Recreation Participate, 15= Recreation Watch, 16= Eat Out, 17= Religious/ Community, 18= Accompany Another Person, 19= Pick-Up Passenger, 20= Drop-Off Passenger, 21= Turn Around, 96= Other, 97 No Other Activity).
destination_loc_act4	character varying	4th Activity at Destination (-1= Not Yet Retrieved, 0= INAP, 1= Home Paid Work, 2= Home Unpaid Work, 3= Home Other,4= Work, 5= Attend Childcare, 6= Attend School, 7= Attend College, 8= Other School Activities, 9= Quick Stops, 10= Personal Business, 11= Major Shopping, 12= Everyday Shopping, 13= Social, 14= Recreation Participate, 15= Recreation Watch, 16= Eat Out, 17= Religious/ Community, 18= Accompany Another Person, 19= Pick-Up Passenger, 20= Drop-Off Passenger, 21= Turn Around, 96= Other, 97= No Other Activity).
end_trip	character varying	Flag for End of Persons Trip (0= Not Ended/Not Travelled yet, 1= End of Trip).
trip_address	character varying	Additional Trips (0= No Additional Trips, 1= Has Additional Trips).
trip_address_other	character varying	Additional trips, other
wave	smallint	Wave of Data Collection (1= 1st Wave of Data, 2= 2nd Wave of Data).
hhsize6	character varying	Total Number of Persons Over the Age of 5 (Range: 0-9 Persons, 10= 10+ Persons).
sample_reg	character varying	Region Classifications (MN= Minneapolis, SP= St. Paul, SMN= Core West (C/H)–Sub. Minneapolis, SSP= Core East (A/R/W)–Sub. St. Paul, RCR= Core South (D/S)–MPO Core, RMN= Ring Counties, MN, RWI= Ring Counties, WI).
origin_taz*	smallint	TAZ ID of origin location
destination_taz*	integer	TAZ ID of destination location
origin_out_reg	smallint	Origin Location Out of Region (1= Yes, 0= No).
destination_out_reg	smallint	Destination Location Out of Region (1= Yes, 0= No).
origin_act	character varying	Activity Category at Origin (1= Work, 2= Education, 3= Higher Education, 4= Maintenance, 5= Shopping, 6= Eating Out, 7= Discretionary, 8= Chauffeur, 9= Home, 10= Turnaround, 96= Other).
dest_act	character varying	Activity Category at Destination (1= Work, 2= Education, 3= Higher Education, 4= Maintenance, 5= Shopping, 6= Eating Out, 7= Discretionary, 8= Chauffeur, 9= Home, 10= Turnaround, 96= Other).
truetrip	smallint	Not a Turnaround or Non-Trip: tripnum=0 (1= Yes, 0= No).
origin_home	smallint	Origin Activity is Home (1= Yes, 0= No)
origin_work	smallint	Origin activity is work (1= Yes, 0= No)
origin_school	smallint	Origin activity is school (1= Yes, 0= No)
origin_coll	smallint	Origin activity is college (1= Yes, 0= No)
origin_main	smallint	Origin activity is main (1= Yes, 0= No)
origin_shop	smallint	Origin activity is shopping (1= Yes, 0= No)
origin_eat	smallint	Origin activity is eating (1= Yes, 0= No)
origin_disc	smallint	Origin activity is discretionary (1= Yes, 0= No)
origin_chaf	smallint	Origin activity is chauffer (1= Yes, 0= No)
origin_turn	smallint	Origin activity is turnaround (1= Yes, 0= No)

origin_other	smallint	Origin activity is other (1= Yes, 0= No)
destination_home	smallint	Destination activity is home (1= Yes, 0= No)
destination_work	smallint	Destination activity is work (1= Yes, 0= No)
destination_school	smallint	Destination activity is school (1= Yes, 0= No)
dep_coll	smallint	Destination activity is college (1= Yes, 0= No)
destination_main	smallint	Destination activity is main (1= Yes, 0= No)
destination_shop	smallint	Destination activity is shopping (1= Yes, 0= No)
deat	smallint	Destination activity is eating (1= Yes, 0= No)
dep_desc	smallint	Destination activity is discretionary (1= Yes, 0= No)
dep_chaf	smallint	Destination activity is chauffer (1= Yes, 0= No)
destination_turn	smallint	Destination activity is turnaround (1= Yes, 0= No)
destination_other	smallint	Destination activity is other (1= Yes, 0= No)
hbw	integer	Home-based work trip (1= Yes, 0= No)
hbsch	integer	Home-based school trip (1= Yes, 0= No)
hbcoll	integer	Home-based college trip (1= Yes, 0= No)
hbmain	integer	Home-based maintenance trip (1= Yes, 0= No)
hbshop	integer	Home-based shopping trip (1= Yes, 0= No)
hbeat	integer	Home-based eating trip (1= Yes, 0= No)
hbdisc	integer	Home-based discretionary trip (1= Yes, 0= No)
hbchaf	integer	Home-based chauffer trip (1= Yes, 0= No)
hbother	integer	Home-based other trip (1= Yes, 0= No)
wbother	smallint	Work-based other trip (1= Yes, 0= No)
hbturn	integer	Home-based turnaround trip (1= Yes, 0= No)
nhb	smallint	Non-home-based trip (1= Yes, 0= No)
hbh	integer	Home-based home trip (1= Yes, 0= No)
trip_mode	character varying	First Mode Used (1= Auto, 2= Bus, 3= Light Rail, 4= Commuter Rail, 5= Bicycle (Skateboard, Scooter), 6= Walk, 7= School Bus, 8= Taxi (Ambulance, Dial-a-Ride, Private Bus), 9= Other).
mode2	character varying	2nd Mode Used (1= Auto, 2= Bus, 3= Light Rail, 4= Commuter Rail, 5= Bicycle (Skateboard, Scooter), 6= Walk, 7= School Bus, 8= Taxi (Ambulance, Dial-a-Ride, Private Bus), 9= Other).
mode3	character varying	3rd Mode Used (1= Auto, 2= Bus, 3= Light Rail, 4= Commuter Rail, 5= Bicycle (Skateboard, Scooter), 6= Walk, 7= School Bus, 8= Taxi (Ambulance, Dial-a-Ride, Private Bus), 9= Other).
modecombo	smallint	Combination of Modes Used- Mode 1, 2, & 3 (1= Auto, 2= Bus, 3= Light Rail, 4= Commuter Rail, 5= Bicycle (Skateboard, Scooter), 6= Walk, 7= School Bus, 8= Taxi (Ambulance, Dial-a-Ride, Private Bus), 9= Other).
primarymode	character varying	Primary Mode Used (1= Auto, 2= Bus, 3= Light Rail, 4= Commuter Rail, 5= Bicycle (Skateboard, Scooter), 6= Walk, 7= School Bus, 8= Taxi (Ambulance, Dial-a-Ride, Private Bus), 9= Other).
trip_access	character varying	Mode Used to Access Primary if Applicable (1= Auto, 2= Bus, 3= Light Rail, 4= Commuter Rail, 5= Bicycle (Skateboard, Scooter), 6= Walk, 7= School Bus, 8= Taxi (Ambulance, Dial-a-Ride, Private Bus), 9= Other).
egress	character varying	Mode Used to Egress Primary if Applicable (1= Auto, 2= Bus, 3= Light Rail, 4= Commuter Rail, 5= Bicycle (Skateboard, Scooter), 6= Walk, 7= School Bus, 8= Taxi (Ambulance, Dial-a-Ride, Private Bus), 9= Other).

act_primegress	smallint	Combination of Modes Used (Access, Primary and Egress) (1= Auto, 2= Bus, 3= Light Rail, 4= Commuter Rail, 5= Bicycle (Skateboard, Scooter), 6= Walk, 7= School Bus, 8= Taxi (Ambulance, Dial-a-Ride, Private Bus), 9= Other).
auto_type	smallint	Drive Alone or Shared Ride (1= Drive Alone, 2= One Passenger, 3= Two or More Passengers).
owncar	smallint	Using HH-Owned Vehicle (1= Yes, 0= No).
hhsize_fin	integer	Total Number of Persons Over the Age of 5 (Range: 0-9 Persons, 10= 10+ Persons).
trvps_fin	smallint	Number of Additional People on Trip (Including Yourself) (-1= Not yet Retrieved, 0= INAP, Range: 1- 250 Persons, 98= Dont Know, 99= Refused).
trvhhps_fin	smallint	Number of Household Members on Trip (Including Yourself) (-1= Not yet Retrieved, 0= INAP, Range: 1- 250 Persons, 998= Dont Know, 999= Refused).
gender	character varying	Gender of person (see lookup_gender)
student_status	character varying	Status: 1- Yes, full-time, 2- Yes, part-time, 3- No: not in school, 8- DK, 9- RF.
education	character varying	Education level (see lookup_education)
employment_status	character varying	Employment status: 0- INAP, 1- Paid full-time worker, 2- Paid part-time worker, 3- Unpaid worker or volunteer, 4- Homemaker, 5- Retired, 6- Unemployed (looking for a job), 7- Unemployed (Not Looking for a job), 8- Disabled non-worker, 9- Student, 96- Other, 98- DK, 99- RF.
telcom	character varying	Telecommuting Status (0= INAP, 1= Yes, 2= No, 3= Works from Home Only, 8= Dont Know, 9= Refused).
htaz*	integer	TAZ ID of home location
wtaz*	integer	TAZ ID of work location
staz*	smallint	TAZ ID of school location
age_bin	smallint	Collapsed Age of Person- For All Persons with Age Info (0= INAP, 1= 5 or younger, 2= 6 to 12 Years Old, 3= 13 to 15 Years Old, 4= 16 to 17 Years Old, 5= 18 to 24 Years Old, 6= 25 to 34 Years Old, 7= 35 to 44 Years Old, 8= 45 to 54 Years Old, 9= 55 to 64 Years Old, 10= 65 to 74 Years Old, 11= 75 to 84 Years Old, 12= 85+ Years Old, 98= Dont Know, 99= Refused).
student	smallint	Currently Studying (1= Yes, 0= No).
worker	smallint	Currently Working (1= Yes, 0= No).
arr_time_final	integer	Time of Arrival - Hour/Minute, 3 AM to 3 AM (Military Time 300 to 2700- no colon, -1= Not yet Retrieved, 8888= INAP).
lvloctime_fin	integer	Time of Departure - Hour/Minute, 3 AM to 3 AM (Military Time 300 to 2700- no colon, -1= Not yet Retrieved, 8888= INAP).
triptime	integer	Length of trip (in hrs)
hhweight	integer	Household expansion factor
origin_lat_utmrd*	integer	Origin latitude
origin_lon_utmrd*	integer	Origin longitude
destination_lat_utmrd*	integer	Destination latitude
destination_lon_utmrd*	integer	Destination longitude
geom*	geometry	Point representation of the place generated from lon/lat coordinate values in the table (WGS 4326). Origin/Destination or arrival/departure points are available but not represented as geometries in this table.

survey_person

The survey_person table contains personal information from the persons who completed the travel survey (a subset of the total persons who participated in the study). Of the persons who completed the survey, a smaller portion also contain GPS travel data.

Name	Data Type	Comment
sampno	numeric	Household identifier
perno	smallint	Person identifier
hhpersonid	integer	Household person identifier
studytype	smallint	Participation in HIS or GPS Sub-sample (0= GPS, 1=HIS).
hhcomp	smallint	Completed Household (0= Not Complete, 1=HIS Complete, 2=GPS Complete).
percomp	smallint	Household Person Complete (0=Not Complete, 1=Complete).
recruitmode	smallint	Method of recruitment (1= Phone, 2=Web).
retrievmode	smallint	Method of Retrieval (0= Not Yet Retrieved, 1=Phone, 2=Web, 3=Mail, 4=Multiple Modes).
diary	smallint	Household Person Self-Report Complete Method (-1= Not yet Retrieved, 0= Not contacted by phone, 1= Complete but not retrieved, 2= Complete and Mailed, 3= Complete and Online, 4= Not Complete, 8= Dont Know, 9= Refused, 97= Not in HH).
proxy	smallint	Diary Retrieval from Person or Proxy (-1= Not Yet Retrieved, 1= Person, 2= Proxy).
proxyperson	smallint	HH Person as Proxy (-1= Not Yet Retrieved, 0= Reported Personal Diary).
gender	smallint	Gender of person (see lookup_gender)
age18	smallint	Age of Person over and under 18 Years (0= INAP, 1= Over 18, 2= Under 18).
age06	smallint	Age of Person over and under 6 Years (1= Under 6, 2= 6+ Years Old).
relation	smallint	Relationship to contact person (see lookup_relation)
driver_license	smallint	Licensed Driver (0= Ineligible to Drive, 1= Yes, 2= No, 8= Dont Know, 9= Refused).
transit_pass	smallint	Type of transit pass (0= INAP, 01= Cash (NEC), 02= Bus/Light Rail Cash Fare, 03= Express Bus Cash Fare, 04= Reduced Bus/Light Rail Cash Fare, 05= Reduced Express Bus Cash Fare, 06= Downtown Zone Fare, 07= Northstar Line Cash Fare, 08= Day Pass, 09= Metropass, 10= Event Pass, 11= Northstar Roundtrip Family Pass, 12= U-Pass, 13= College Pass, 14= Student Pass, 15= Supersavers, 16= Dial-A-Ride Fare, 94= Dont Use A Transit Pass, 95= Do Not Usually Use Transit/Dont Use Transit, 96= Other, 98= Dont Know, 99= Refused).
transit_pass_pay	smallint	Transit Pass Subsidized (0= INAP, 1= Yes, 2= No, 98= Dont Know, 99= Refused).
student	smallint	Student Status (1= Yes: Full-Time, 2= Yes: Part-Time, 3= No: Not in School, 8= Dont Know, 9= Refused).
education	smallint	Education level (see lookup_education)
employment	smallint	Employment status (see lookup_employmenttype)
empl_eve	smallint	Primary Work Includes Evenings (-1= Not Yet Retrieved, 0= Not Provided/INAP, 1= Yes, 2= No, 98= Dont Know, 99= Refused).
empl_night	smallint	Primary Work Includes Overnights (-1= Not Yet Retrieved, 0= Not Provided/INAP, 1= Yes, 2= No, 98= Dont Know, 99= Refused).

empl_hrs	double precision	Average Number of Hours Worked in a Week (-1= Not Yet Retrieved, 0= Not Provided/INAP, Range: 1-120 Hours, 998= Dont Know, 999= Refused).
empl_flex	smallint	Flexibility in Work Hours (-1= Not Yet Retrieved, 0= Not Provided/INAP, 1= No Flexibility, 2= Some Flexibility, 3= Pretty Much Free, 8= Dont Know, 9= Refused).
empl_compr	smallint	Employer Offers Compressed Work Week (-1= Not Yet Retrieved, 0= Not Provided/INAP, 1= Yes, 2= No, 8= Dont Know, 9= Refused).
empl_multi_trips	smallint	Job Requires 5+ Trips per Day (-1= Not Yet Retrieved, 0= Not Provided/INAP, 1= Yes, 2= No, 8= Dont know, 9= Refused).
empl_avgtrips	smallint	Average Number of Trips per Work day (-1= Not Yet Retrieved, 0= Not Provided/INAP, 998= Dont Know, 999= Refused).
empl_sec	smallint	Works More Than One Job (-1= INAP, 1= Yes, 2= No, 8= Dont Know, 9= Refused).
empl_sec_hours	smallint	Second Job Hours (-1= INAP, 1= Full-time, 2= Part-time. 3= Varies, 8= Dont Know, 9= Refused).
empl_telecom	smallint	Telecommuting Status (0= INAP, 1= Yes, 2= No, 3= Works from Home Only, 8= Dont Know, 9= Refused).
empl_telfreq	smallint	Frequency of Telecommuting (-1= INAP, 1= Almost Every Day (4 or 5 Days per Week), 2= Once a Week or More, 3= Once a Month or More, 4= A Few Times a Year or More, 5= Once a Year, 8= Dont Know, 9= Refused).
empl_telpolicy	smallint	Company Policy on Telecommuting (0= INAP, 1= Yes, 2= No, 98= Dont Know, 99= Refused, 999= Flag (TBD)).
commute_mode	smallint	Usual Mode When Not Telecommuting (0= INAP, 1= Drive Alone, 2= Shared Ride - 2 Person (Carpool), 3= Shared Ride - 3+ persons (Carpool), 4= VanPool, 5= Transit- Walk Access, 6= Transit- Auto Access, 7= Walk, 8= Bike, 9= Work at Home, 96= Other, 98= Dont Know, 99= Refused, 999= Flag (TBD)).
empl_telwork	smallint	Work at Home Before and After Workday (0= INAP, 1= Yes, 2= No, 98= Dont Know, 99= Refused, 999= Flag (TBD)).
disabled	smallint	Disability Status (0= INAP, 1= Yes, 2= No, 98= Dont Know, 99= Refused, 999= Flag (TBD)).
disability	smallint	Type of disability (see lookup_disability).
industry	smallint	Employment industry of primary workplace (see lookup_industry).
industry_other	character varying	Other, specify for employment industry of primary workplace.
school_type	smallint	Type of School Enrollment (-1= Not Yet Retrieved, 1= Pre-School/Nursery School, 2= K-12, 3= Vocational/Technical, 4= Full-Time College Student, 5= Part-Time College Student, 98= Dont Know, 99= Refused).
school_city	character varying	School city
school_state_id	character varying	School state
school_zipcode	integer	School zip code
school_lon*	double precision	School longitude
school_lat*	double precision	School latitude
school_yutm*	integer	Y coordinate (UTM coordinate system) of school
school_xutm*	integer	X coordinate (UTM coordinate system) of school
empl_city	character varying	Work city
empl_state	character varying	Work state
empl_zipcode	integer	Work zip code

empl_lon*	double precision	Primary employer longitude
empl_lat*	double precision	Primary employer latitude
empl_yutm*	integer	Y coordinate (UTM coordinate system) of work location.
empl_xutm*	integer	X coordinate (UTM coordinate system) of work location.
wave	smallint	Wave of data collection (1= 1st Wave of Data, 2= 2nd Wave of Data).
sample_region	character varying	Region Classifications (MN= Minneapolis, SP= St. Paul, SMN= CORE WEST (C/H)–Carver Hennepin, SSP= CORE EAST (A/R/W)–Anoka Ramsey Washington, RCR= CORE SOUTH (D/S)–Dakota Scott, RMN= Ring Counties, MN, RWI= Ring Counties, WI).
home_taz*	integer	TAZ ID of home location
home_county	character varying	County where home is located
empl_taz*	integer	TAZ ID of work location
school_taz*	integer	TAZ ID of school location
age_bin	smallint	Collapsed Age of Person (For All Persons with Age Info) (0= INAP, 1= 5 or Younger, 2= 6 to 12, 3= 13 to 15, 4= 16 to 17, 5= 18 to 24, 6= 25 to 34, 7= 35 to 44, 8= 45 to 54, 9= 55 to 64, 10= 65 to 74, 11= 75 to 84, 12= 85 and Over, 98= Dont Know, 99= Refused).
age*	smallint	Discretized age of person
nrel_agebin	integer	NREL derived age bins for public distribution: 1= ¡16 YO, 2= 16-25 YO, 3= 26-35 YO, 4= 36-45 YO, 5= 46-55 YO, 6= 56-65 YO, 7= 66-79 YO, 8= 80+ YO, 999= DK/RF
currstudent	smallint	Currently Studying (1= Yes, 0= No).
worker	smallint	Currently Working (1= Yes, 0= No).
trupertrip	smallint	N/A
person_trips	smallint	Number of trips (not including turnaround or placeholder entries) in trip file.
perexp	smallint	Person expansion factor
hbw	smallint	Number of weighted home-based work trips in trip file.
hbsch	smallint	Number of weighted home-based school trips in trip file.
hbcoll	smallint	Number of weighted home-based college trips in trip file.
hbmain	smallint	Number of weighted home-based maintenance trips in trip file.
hbshop	smallint	Number of weighted home-based shopping trips in trip file.
hbeat	smallint	Number of weighted home-based eating trips in trip file.
hbdisc	smallint	Number of weighted home-based discretionary trips in trip file.
hbchaf	smallint	Number of weighted home-based chauffer trips in trip file.
hbother	smallint	Number of weighted home-based other trips in trip file.
wbother	smallint	Number of weighted work-based other trips in trip file.
nhb	smallint	Number of weighted non-home-based trips in trip file.
perwgt	integer	Number of weighted total trips in trip file.
geom*	geometry	Point grabbed from place table where place name = Home.

survey_households

The survey_households table includes data from households that participated in the survey portion of the study (a subset of the total households in the study).

Name	Data Type	Comment
sampno	numeric	Household identifier
qkey	integer	Household sample ID number
study_type	integer	Participation in HIS or GPS Sub-sample (0= GPS, 1= HIS).
phone_match	integer	Sample Record Matched to Phone Number (0= Unmatched, 1= Matched).
mailwave	integer	Wave Assignment of HH (1= PILOT/FALL 2010, 2= MARCH 2011, 3= APRIL 2011, 4= MAY 2011, 5= JUNE THRU AUGUST 2011, 6= Targeted, 8= University Sample).
recruite	integer	Method of Recruitment (1= Phone, 2= Web).
retrieval	integer	Method of Retrieval (0= Not Yet Retrieved, 1= Phone , 2= Web, 3= Mail, 4= Multiple modes).
travel_date	integer	Assigned Travel Date (YYYYMMDD).
dow	integer	Day of Week (2= Monday , 3= Tuesday, 4= Wednesday, 5= Thursday, 6= Friday).
travel_week	integer	Scheduled Travel Week (1= Week of 12/5, 2= Week of 12/12, 3= Week of 12/19, 4= Week of 12/26, 5= Week of 01/02, 6= Week of 01/10, 7= Week of 01/16, 8= Week of 01/23, 9= Week of 01/30, 10= Week of 02/06, 11= Week of 02/13, 12= Week of 02/20, 13= Week of 02/27, 14= Week of 03/06, 15= Week of 03/13, 16= Week of 03/20, 17= Week of 03/27, 18= Week of 4/3, 19= Week of 4/10, 20= Week of 4/17, 21= Week of 4/24, 22= Week of 5/1, 23= Week of 5/8, 24= Week of 5/15, 25= Week of 5/22, 26= Week of 5/29, 27= Week of 6/5, 28= Week of 6/12, 29= Week of 6/19, 30= Week of 6/26, 31= Week of 7/3, 32= Week of 7/10, 33= Week of 7/17, 34= Week of 7/24, 35= Week of 7/31, 36= Week of 8/7, 37= Week of 8/14, 38= Week of 8/21, 39= Week of 8/28, 40= Week of 9/4, 41= Week of 9/11, 42= Week of 9/18, 43= Week of 9/25, 44= Week of 10/2, 45= Week of 10/, 46= Week of 10/16, 47= Week of 10/23, 48= Week of 10/30, 49= Week of 11/06, 50= Week of 11/13, 51= Week of 11/20, 52= Week of 11/27).
home_complete	integer	Completed Household (0= Not Completed, 1= HIS Completed, 2= GPS Completed).
exhhcomp	integer	Expanded Completed Household (0= Not Completed, 1= HIS Completed, 2= Partial HIS Completed, 3= GPS Completed, 4= Partial GPS Completed, 5= University HH Completed).
gps_complete_status	integer	GPS Household Completion Status (0= Not a GPS Household, 1= Neither Complete, 2= Diary Complete But Not GPS, 3= GPS Complete But Not Diary, 4= Completed Entire Study, 5= Some Household Members Completed Both, Others Did Not).
gps_study	integer	GPS Pilot/Main Study (0= HTS ONLY, 1= Pilot (Feb 21-May 1st), 2= Main (May-Oct 1st)).
compmonth	integer	Month of HH Completion (0= Not Yet Completed, 1= January-2011, 2= February-2011, 3= March-2011, 4= April-2011, 5= May-2011, 6= June-2011, 7= July-2011, 8= August-2011, 9= September-2011, 10= October-2011, 11= November-2011, 12= December-2010).
incentive_amount	integer	Incentive Amount (-1= Not eligible for incentive).
incentive	integer	Household Classification Receiving Incentive (0= Not Incented/Not Comp, 1= GPS HH, 2= HTS HH, 3= University HH, 4= GPS HH No incentive).
sub_sample_type	integer	Household Sub-sample Classification (1= University Household, 2= MNPass Household, 3= University/MNPass Household, 4= No Classification).

univremind	integer	University Household Received a Reminder Letter (0= Not University Household/Did Not Receive Letter, 1= Received a Reminder Letter).
market	integer	Geographic Area (1= St. Paul, 2= Minneapolis, 3= 7-County Metropolitan Area, 4= Minnesota Collar Counties, 5= Wisconsin Counties, 9= University Sample (TBD)).
area	integer	Verified Geographic Area (1= ST. PAUL, MN, 2= MINNEAPOLIS, MN, 3= ANOKA, MN, 4 = CARVER, MN, 5= DAKOTA, MN, 6= HENNEPIN, MN, 7= SCOTT, MN, 8= RAMSEY, MN, 9= WASHINGTON, MN, 10= CHISAGO, MN, 11= GOODHUE, MN, 12= ISANTI, MN, 13= LE SUEUR, MN, 14= MCLEOD, MN, 15= RICE, MN, 16= SHERBURNE, MN, 17 = SIBLEY, MN, 18 = WRIGHT, MN, 19= PIERCE, WI, 20= POLK, WI, 21= ST. CROIX, WI).
home_city	character varying	Home city
home_state	character varying	Home state
homezip	integer	Home zip code
home_lon*	double precision	Home longitude
home_lat*	double precision	Home latitude
home_yutm*	integer	Y coordinate (UTM coordinate system) of home location
home_xutm*	integer	X coordinate (UTM coordinate system) of home location
income	integer	HH Income (1= Less than $5,000, 2= $5,000 but less than $10,000 , 3= $10,000 but less than $15,000, 4= $15,000 but less than $20,000, 5= $20,000 but less than $25,000, 6= $25,000 but less than $30,000, 7= $30,000 but less than $35,000, 8= $35,000 but less than $40,000, 9= $40,000 but less than $45,000, 10= $45,000 but less than $50,000, 11= $50,000 but less than $60,000, 12= $60,000 but less than $75,000, 13= $75,000 but less than $100,000, 14= $100,000 but less than $125,000, 15= $125,000 but less than $150,000, 16= $150,000 but less than $200,000, 17= $200,000 but less than $250,000, 18= $250,000 or more, 96= Below $50,000, 97= Above $50,000, 98= Dont know, 99= Refused).
drivers	integer	Number of drivers in household
disabled	integer	Number of household members with a disability or impairment
vehicle_count	integer	Number of HH vehicles (Range:1-9 vehicles, 10= 10+ vehicles).
quotaregion	character varying	Quota Region Classifications (0= Out of Region, 1= Minneapolis, 2= St. Paul, 3= CORE WEST (C/H)–Carver Hennepin, 4= CORE EAST (A/R/W)-Anoka Ramsey Washington, 5= CORE SOUTH (D/S)- Dakota Scott, 6= Ring Counties, MN, 7= Ring Counties, WI).
quotahhsize	integer	Quota Household Size Classifications (Range: 1-3, 4= 4+).
quotatotveh	integer	Quota Household Vehicle Classifications (Range: 1-3, 4= 4+).
mnpass	integer	Presence of MNPass (-1= INAP, 1= Yes, 2= No , 98= Dont know, 99= Refused).
mnpasspay	integer	MNPass Subsidized (-1= INAP, 1= Yes, 2= No, 98= Dont know, 99= Refused).
bike_count	integer	Number of household bicycles: RANGE: 0-9, 10=10+, 98=DK, 99=RF.
residence_type	integer	Type of Housing (1= Single family home, 2= Mobile home/Manufactured home, 3= Townhome, 4= Duplex/Triplex/Fourplex, 5= Apartment, 6= Condominium/Cooperative, 7= Group Housing, Assisted Living, or Other Institutional Housing, 96= Other, 98= Dont Know, 99= Refused).
home_units	integer	Number of Units in Complex (-1= INAP, Range: 1-100 units, 100= 100+ Units, 998= Dont Know, 999= Refused).

own	integer	Own or Rent Home (-1= INAP, 1= Own/Buying, 2= Rent, 7= Other, 8= Dont know, 9= Refused).
tenure	integer	Length of Time at Current Address (1= Less than 2 Years, 2= 2-5 Years, 3= 6-10 Years, 4= More than 10 Years, 98= Dont Know, 99= Refused).
rent	integer	Amount of Payment for Home (99996= Flagged (TBD), 99997= Home is Paid For, 99998= Dont Know, 99999= Refused).
paymnt	integer	Frequency of Payments (0= INAP, 1= Monthly, 2= Biweekly (Every 2 Weeks), 3= Quarterly, 7= Other, 98= Dont Know, 99= Refused).
wave	integer	Wave of Data Collection (1= 1st Wave of Data, 2= 2nd Wave of Data).
home_taz*	integer	TAZ ID of home location
children_count	integer	Number of children under six years old
persons_count	integer	Number of persons over 6 years old: RANGE: 1-15, 98=DK, 99=RF.
home_size	integer	Total persons in household
hh_workers	integer	Number of workers in person file
student_count	integer	Number of household students
region	character varying	Region Where Home is Located (MN= Minneapolis, SMN= Carver Hennepin, SP= St. Paul, SSP= Anoka Ramsey Washington, RMN= Rest of Minnesota, RWI= Rest of Wisconsin, RCR= Dakota Scott).
home_county_name	character varying	County where home is located.
lifecycle	character varying	Household type (a.k.a household lifecycle).
home_size_category	character varying	Household Size Category (1= Household with One Member, 2= Household with Two Members, 3= Household with Three Members, 4+= Household with Four or More Members).
worker_count	character varying	Workers in Household (0= Household with No Workers, 1= Household with One Worker, 2+= Household with Two or More Workers).
vehicle_category	character varying	Auto Vehicles Owned By Household (0= Household With No Motor Vehicles, 1= Household With One Motor Vehicle, 2+= Household with Two or More Motor Vehicles).
trip_count	integer	Number of trips (not including turnaround or placeholder entries) in trip file
hhwgt	integer	Household expansion factor
hbw	integer	Number of weighted home-based work trips in trip file
hbsch	integer	Number of weighted home-based school trips in trip file
hbcoll	integer	Number of weighted home-based college trips in trip file
hbmain	integer	Number of weighted home-based maintenance trips in trip file
hbshop	integer	Number of weighted home-based shopping trips in trip file
hbeat	integer	Number of weighted home-based eating trips in trip file
hbdisc	integer	Number of weighted home-based discretionary trips in trip file
hbchaf	integer	Number of weighted home-based chauffer trips in trip file
hbother	integer	Number of weighted home-based other trips in trip file
wbother	integer	Number of weighted work-based other trips in trip file
nhb	integer	Number of weighted non-home-based trips in trip file
work_trip_count	integer	Number of weighted total trips in trip file
geom*	geometry	Point grabbed from place table where place name = Home

Wearable Tables

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
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
distance_miles	double precision	Distance covered during trip (in miles)
duration_min	double precision	Duration of trip (in minutes)
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 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
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, persons, trips, etc.) are derived from point tables. This table has 55 household identifiers that are not contained within the survey results. No referential integrity is established between this table and the survey data 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	integer	Person identifier
time_local	timestamp without time zone	Local timestamp
gpsspeed	double precision	GPS speed (in MPH)
sat	integer	Number of satellites
course	double precision	N/A
hdop	integer	HDOP of computed position
distance	double precision	Distance (in miles) from last point
altitude	double precision	Elevation from USGS digital map lookup and NREL elevation processing (in feet)
geom*	geometry	GPS point data

w_households

The w_households table was generated by NREL to establish a householdkey for the wearable sample.

Name	Data Type	Comment
sampno	numeric	Household identifier
geom*	geometry	Point grabbed from place table where place name = Home.

Sorted by Person Tables

gps_households

The w_households table was generated by NREL to establish a householdkey for the wearable sample.

Name	Data Type	Comment
sampno	numeric	Household identifier

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

gps_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, persons, trips, etc.) are derived from point tables. This table has 55 household identifiers that are not contained within the survey results. No referential integrity is established between this table and the survey data 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	integer	Person identifier
time_local	timestamp without time zone	Local timestamp
gpsspeed	double precision	GPS speed (in MPH)
sat	integer	Number of satellites
course	double precision	N/A
hdop	integer	HDOP of computed position
distance	double precision	Distance (in miles) from last point
altitude	double precision	Elevation from USGS digital map lookup and NREL elevation processing (in feet)

gps_trips

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
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
distance_miles	double precision	Distance covered during trip (in miles)
duration_min	double precision	Duration of trip (in minutes)

* 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.