# Documentation of RSPM V3.5 Output Data

RSPM V3.5, in addition to saving all of the household microsimulation data, saves three lists which contain a number of cross tabulations. These lists are:

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| **List Name** | **File Name** | **Description** |
| Hh\_ | Hh\_.RData | Household tabulations. Note that the travel quantities area for the households living in the study area, regardless of where the travel occurs. The tabulations also do not account for travel in the study area by households living outside the study area. |
| CommServ\_ | CommServ\_.RData | Tabulations of light-duty commercial vehicle travel occurring as a result of direct or indirect demand of households living in the study area. |
| Metropolitan\_ | Metropolitan\_.RData | Summary tabulations for the metropolitan area, primarily relating to roadway travel and congestion. |

## Hh\_

The following table describes tabulations collected in the Hh\_ list.

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| **Name** | **Quantity** |
| AveDensity.DiDt | Persons per square mile by district, development type |
| Acres.DiDt | Land area in acres by district, development type |
| AveVehAge.DiIgDtPp | Average vehicle age by district, income group, development type, population type |
| DrvAgePop.DiIgDtPp | Number of driving age persons by district, income group, development type, population type |
| Dvmt.DiIgDtPp | Daily vehicle miles traveled by district, income group, development type, population type |
| ElecCo2e.DiIgDtPp | Daily metric tons CO2e from generation of electricity to power EVs and PHEVs by district, income group, development type, population type |
| ElecKwh.DiIgDtPp | Daily kilo-watt hours of electricity to power EVs and PHEVs by district, income group, development type, population type |
| EvDvmt.DiIgDtPp | Daily vehicle miles traveled powered by electricity by district, income group, development type, population type |
| EvDvmt.DiVtPt | Daily vehicle miles traveled powered by electricity by district, vehicle type, powertrain type |
| Fuel.DiIgDtPp | Daily gasoline-equivalent gallons of hydrocarbon fuel consumed by district, income group, development type, population type |
| Fuel.DiVtPt | Daily gasoline-equivalent gallons of hydrocarbon fuel consumed by district, vehicle type, powertrain type |
| FuelCo2e.DiIgDtPp | Daily metric tons of CO2e produced by vehicle travel powered by district, income group, development type, population type |
| HcDvmt.DiIgDtPp | Daily vehicle miles powered by hydrocarbon fuel by district, income group, development type, population type |
| HcDvmt.DiVtPt | Daily vehicle miles powered by hydrocarbon fuel by district, vehicle type, powertrain type |
| Hh.DiIgDtPpHt | Number of households by district, income group, development type, population type, housing type |
| HhCo2e.DiIgDtPp | Daily metric tons CO2e emitted by household vehicle travel by district, income group, development type, population type |
| HhInc.DiIgDtPp | Total annual household income (2005 dollars) by district, income group, development type, population type |
| HhExtCost.DiIgDtPp | Daily vehicle externality cost (2005 dollars) by district, income group, development type, population type |
| HhOpCost.DiIgDtPp | Daily vehicle operation cost (2005 dollars) by district, income group, development type, population type |
| HhParkingCost.DiIgDtPp | Daily cost for parking (2005 dollars) by district, income group, development type, population type |
| HhVehOwnCost.DiIgDtPp | Daily vehicle ownership cost (2005 dollars) by district, income group, development type, population type |
| LtWtVehDvmt.DiIgDtPp | Daily vehicle miles traveled by district, income group, development type, population type |
| LtWtVehDvmt.DiDtPpMx | Daily vehicle miles traveled by bicycles and other light-weight vehicles by district, development type, population type, urban mixed-use category |
| NumAuto.DiIgDtPp | Number of autos by district, income group, development type, population type |
| NumLtTruck.DiIgDtPp | Number of light trucks by district, income group, development type, population type |
| NumPowertrain.DiDtPpPt | Number of autos and light trucks by district, development type, population type, powertrain type |
| NumPowertrain.DiVtPt | Number of autos and light trucks by district, vehicle type, powertrain type |
| Pop.DiDt | Number of persons by district, development type |
| Pop.DiIgDtPpHt | Number of by district, income group, development type, population type, housing type |
| Pop.DiDtPpMx | Number of persons by district, development type, population type, urban mixed-use category |
| VehAge.DiAg | Number of vehicles by district, age |
| WalkTrips.DiDtPpMx | Annual walk trips by district, development type, population type, urban mixed-use category |
| WaterUse.DiDt | Daily gallons of water used by district, development type |
| CritAirPol.DiDtPo | Daily grams of critical air pollutants emitted by district, development type, pollutant |

## List CommServ\_

The following table describes tabulations collected in the CommServ\_ list.

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| **Name** | **Quantity** |
| AutoCo2GmPerMi.Ag | CO2e emission rates (grams per mile) by vehicle age |
| AutoEvCo2GmPerMi.Ag | Auto electric vehicle CO2e emission rates (grams per mile) by vehicle age |
| AutoHcCo2GmPerMi.Ag | Auto hydrocarbon-powered vehicle CO2e emission rates (grams per mile) by vehicle age |
| AveAutoFuelCo2 | Average carbon intensity of hydrocarbon fuels used by automobiles |
| AveLtTruckFuelCo2 | Average carbon intensity of hydrocarbon fuels used by light trucks |
| CommServAutoAgProp.Ag | Auto age proportions by vehicle age |
| CommServAutoDvmt.MdDt | Auto daily vehicle miles traveled by metropolitan division and development type |
| CommServAutoEvCo2e.MdDt | Daily metric tons CO2e from generation of electricity to power auto EVs and PHEVs by metropolitan division and development type |
| CommServAutoEvDvmt.MdDt | Daily vehicle miles traveled by autos powered by electricity by metropolitan division and development type |
| CommServAutoFuel.MdDt | Daily gasoline-equivalent gallons of hydrocarbon fuel consumed by autos by metropolitan division and development type |
| CommServAutoHcCo2e.MdDt | Daily metric tons of CO2e produced by auto travel powered by hydrocarbon fuel by metropolitan division and development type |
| CommServAutoHcDvmt.MdDt | Daily vehicle miles traveled by auto powered by hydrocarbon fuel by metropolitan division and development type |
| CommServAutoMpgMpkwh.AgPt | Auto miles per gallon and miles per kilowatt-hour by vehicle age and powertrain type |
| CommServAutoMpgMpkwh.Pt | Auto miles per gallon and miles per kilowatt-hour by powertrain type |
| CommServAutoPower.MdDt | Daily kilowatt-hours of electric power consumed by autos by metropolitan division and development type |
| CommServAutoProp.AgPt | Proportion of auto DVMT by vehicle age and powertrain type |
| CommServAutoProp.Pt | Proportion of auto DVMT by powertrain type |
| CommServAveAutoMpg | Average auto miles per gallon |
| CommServAveAutoMpkwh | Average auto miles per kilowatt-hour |
| CommServAveLtTruckMpg | Average light truck miles per gallon |
| CommServAveLtTruckMpkwh | Average light truck miles per kilowatt-hour |
| CommServCosts. | Cost by category (TotExtCost, CarbonTax, AddedExtTax, FuelCost, PowerCost, RoadUseTax, TotRoadCost |
| CommServLtTruckAgProp.Ag | Light truck age proportions by vehicle age |
| CommServLtTruckDvmt.MdDt | Light truck daily vehicle miles traveled by metropolitan division and development type |
| CommServLtTruckEvCo2e.MdDt | Daily metric tons CO2e from generation of electricity to power light truck EVs and PHEVs by metropolitan division and development type |
| CommServLtTruckEvDvmt.MdDt | Daily vehicle miles traveled by light trucks powered by electricity by metropolitan division and development type |
| CommServLtTruckFuel.MdDt | Daily gasoline-equivalent gallons of hydrocarbon fuel consumed by light trucks by metropolitan division and development type |
| CommServLtTruckHcCo2e.MdDt | Daily metric tons of CO2e produced by light truck travel powered by hydrocarbon fuel by metropolitan division and development type |
| CommServLtTruckHcDvmt.MdDt | Daily vehicle miles traveled by light truck powered by hydrocarbon fuel by metropolitan division and development type |
| CommServLtTruckMpgMpkwh.AgPt | Light truck miles per gallon and miles per kilowatt-hour by vehicle age and powertrain type |
| CommServLtTruckMpgMpkwh.Pt | Light truck miles per gallon and miles per kilowatt-hour by powertrain type |
| CommServLtTruckPower.MdDt | Daily kilowatt-hours of electric power consumed by light trucks by metropolitan division and development type |
| CommServLtTruckProp.AgPt | Proportion of light truck DVMT by vehicle age and powertrain type |
| CommServLtTruckProp.Pt | Proportion of light truck DVMT by powertrain type |
| CommVehCo2e | Total daily metric tons CO2e emitted |
| CommVehDvmt | Total daily vehicle miles traveled |
| CommVehDvmt.MdDt | Daily vehicle miles of travel by metropolitan division and development type |
| CommVehDvmtPerInc | Average daily vehicle miles travel per dollar of household income |
| CommVehEvDvmt | Total daily vehicle miles traveled powered by electricity |
| CommVehFuel | Total daily gasoline-equivalent gallons of fuel consumed |
| CommVehHcDvmt | Total daily vehicle miles traveled powered by hydrocarbon fuels |
| LtTruckCo2GmPerMi.Ag | Light truck electric vehicle CO2e emission rates (grams per mile) by vehicle age |
| LtTruckEvCo2GmPerMi.Ag | Light truck hydrocarbon-powered vehicle CO2e emission rates (grams per mile) by vehicle age |

## List Metropolitan\_

The following table describes tabulations collected in the Metropolitan\_ list.

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| **Name** | **Quantity** |
| ArtLnMiCap.Yr | Arterial lane-miles per 1000 persons by year |
| AveCongTaxPerMi | Average congestion tax paid per vehicle mile traveled |
| AveSpeed.Ty | Average speed by vehicle type (light-duty, heavy truck, bus) |
| BusDvmt.ClFc | Bus daily vehicle miles traveled by congestion level and roadway functional class |
| BusFuel.Ft | Daily gasoline equivalent gallons of fuel consumed by buses by fuel type |
| BusHcCo2e | Daily metric tons of CO2e emitted by buses powered by hydrocarbon fuels |
| BusRevMi.Yr | Annual bus revenue miles |
| CostSummary.MdVa | Cost summary of total cost by metropolitan division and cost category |
| DelayVehHr.Ty | Daily vehicle hours of delay by vehicle type |
| Dvmt.MdDt | Daily vehicle miles traveled by households in the area by metropolitan division and development type |
| Dvmt.Ty | Daily vehicle miles traveled on area roadways by vehicle type |
| FeAdj.ClFcAv | Fuel economy adjustment by congestion level, roadway functional class, and combined vehicle and powertrain type |
| FfVehHr.Ty | Daily vehicle hours of travel if at free flow speeds by vehicle type |
| FwyLnMiCap.Yr | Freeway lane miles per capita by year |
| Inc.DtYr | Total household income by development type and year |
| LtVehDvmt.ClFc | Light-duty vehicle (auto & light truck) daily vehicle miles traveled by congestion level and roadway functional class |
| LtVehEcoAdj.ClFc | MPG adjustment factors for light-duty vehicle eco-drivers by congestion level and roadway functional class |
| LtVehNonEcoAdj.ClFc | MPG adjustment factors for light-duty vehicle non-eco-drivers by congestion level and roadway functional class |
| LtVehRoadCritAirPol.Po | Daily grams of critical air pollutants emitted by light-duty vehicle travel on metropolitan area roadways by pollutant |
| MpgMpkwhAdj.Pt | MPG and mile per kilowatt-hour adjustment factors by powertrain type |
| Pop.DiDtYr | Population by district, development type, and year |
| Pop.DtYr | Population by development type and year |
| RailBusEvCo2e | Daily metric tons of CO2e emitted by power generation to for bus and train travel powered by electricity |
| RailBusPower | Daily kilowatt-hours of electric power used for bus and train travel |
| RailRevMi.Yr | Annual train revenue miles by year |
| RoadCostSummary. | Summary of average daily roadway costs, daily road use taxes collected, and difference |
| SpdCalc\_ | List containing speed calculation results |
| TranRevMiCap.Yr | Annual bus and train revenue miles by year |
| TruckCo2e | Daily metric tons of CO2e emitted by heavy trucks on area roadways |
| TruckDvmt.ClFc | Daily vehicle miles of travel by heavy trucks by congestion level and roadway functional class |
| TruckFuel.Ft | Daily gasoline-equivalent gallons of fuel consumed by fuel type |
| VehHr.Ty | Daily vehicle hours traveled by vehicle type |
| VmtSurcharge.It | Calculated light-duty vehicle VMT surcharge (dollars per vehicle mile) to collect sufficient revenues to pay for roadway costs due to light-duty vehicle travel |