

# IMTC 2014 Passenger Vehicle Survey

## Database Readme File

Version 1.1 (December 29, 2014)

### Important Notes on Using the Database

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- When querying for a total value, use the field titled "ExpansionNumber." These expansion factors will proportion each individual record to actual traffic volumes for that specific port-of-entry, day, direction, and hour. See the included sample queries.

However, if you are querying fields that are *opinion*-based (e.g., "How has your border experience changed?" and "Do you think border wait time signs are accurate?"), then consider selecting **Count** rather than summing expansion factors. Top-of-mind opinions can range greatly, so expanding opinion-based responses to represent what other travelers might think may be inappropriate.

- If you are reporting in actual numbers instead of percentages, then it is recommended that you break out your queries by **weekday** and **weekend**. This is because the traffic patterns on weekdays and weekend days are very different, and a count will erroneously merge the two patterns together. This is not an issue if you are planning to use percentages.
- Travel characteristics between NEXUS travelers and General Purpose travelers, as well as between country of residents, can be quite different depending on the field(s) being queried. Experiment with breaking apart records by these characteristics (or others) to generate a more defined result.

### Tables and Queries in the Database

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#### Tables

The database consists of six primary tables of data:

- **SUMMER\_2000:** The records from the 2000 IMTC Cross-Border Trade and Travel Study summer wave of intercept surveys.
- **FALL\_2000:** The records from the 2000 IMTC Cross-Border Trade and Travel Study fall wave of intercept surveys.
- **SUMMER\_2007:** The summer records from the 2007 IMTC Passenger Vehicle Intercept Survey.
- **WINTER\_2008:** The winter records from the 2008 IMTC Passenger Vehicle Intercept Survey.
- **SUMMER\_2013:** The most recent summer records from the 2013 IMTC Passenger Vehicle Intercept Survey.
- **WINTER\_2014:** The most recent winter records from the 2014 IMTC Passenger Vehicle Intercept Survey.

#### Queries

Four sample queries are included in the database to illustrate how to use the expansion factors.

- **CountryOfResidence\_Winter14:** This simple query separates winter 2014 cross-border travelers aggregated from all four Cascade Gateway ports of entry (not Pt. Roberts) by country of residence.

- **TripPurposePtRoberts\_Winter14:** This simple query looks at responses to the question “What is your trip purpose?” filtered into predefined categories from winter 2014 cross-border travelers transiting one specific port of entry – Pt. Roberts.
- **Residence-DestinationMatrixPHwy\_Summer13:** This crosstab query breaks up summer 2013 cross-border travelers transiting the Pacific Highway port of entry by their specific trip origins and end-destinations. This illustrates the flow of travelers between the designated Superzones (see **Figure 2.**).
- **CrossingChoice\_Summer13:** This crosstab query looks at responses to the question “Why did you choose this border crossing?” To get very specific results, the matrix is split up by three other fields: port of entry, direction of traffic, and inspection booth type.

## Data Expansion Factors

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Expansion factors were developed by dividing the total count of vehicles through a particular port/direction each hour by the total count of surveys collected for that hour. Therefore, expansion factors vary by hour, day type, summer, winter, etc. Note that these are twelve hour counts in summer (approx. 8am-8pm) and nine hour counts in winter (approx. 8am-5pm).

For the 2013/14 study, all expansion factors are based on the total traffic count of the border, regardless of lane. For 2007/08 northbound and southbound Peace Arch traffic, NEXUS lane expansion factors are based on the traffic counts of the NEXUS lane.

Because the total traffic counts from U.S. Customs & Border Protection (CBP) and Canada Border Services Agency (CBSA) were for the whole hour, but survey set up/break down did not allow for surveying the entire first hour or last hour of any day, traffic counts were manipulated to reflect these partial hours of surveying. For example, if surveying began at 8:30am on a certain day, the traffic count for that day for the 8am to 9am block was cut in half. This new reduced count was then used for calculating the expansion factor for that half hour block of surveys.

## Database Post-Processing

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After the data were collected, post-processing cleaned up any inconsistencies during the survey period and coded each record with appropriate traffic analysis zone (TAZ) and superzone information (see figures 1. and 2.). More information on the details of the post-processing effort are in the final report.

For records that originally had no TAZ association:

- If a place (residence/origin/destination) has only one recognizable TAZ (e.g. Vancouver, Richmond, West Vancouver, etc. from **Figure 1.**) the blank was filled in with the one recognizable TAZ.
- For places with many TAZ associations (Surrey, Bellingham, etc. from **Figure 1.**), the blanks were filled with TAZ's proportionally according to the number of TAZ's already associated with that place in the data (for instance, if 75% of records for Surrey residence are labeled with TAZ #41, then for Surrey residence records with blank residence TAZ's, 75% of the blanks were filled with TAZ #41).<sup>1</sup>

Recreation was chosen for any trip two days in length or under. Vacation was chosen for any trip lasting longer than 3 days. Exceptions were made by surveyors ad hoc based on respondents' answers.

A formula was developed to calculate trip duration (based on length unit and length value), where values were standardized in units of “days.” For example, 1 day = 1, 1 week = 7, etc. Hours were converted into

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<sup>1</sup> TAZ's are used on their own (not in association with other fields in queries), so filling in TAZ's proportionally does not disrupt data continuity.

fractions of days, i.e. 6 hours = 0.25. One way trips were given the duration of 7300, which equals 20 years.

A formula was developed for frequency (based on frequency unit and frequency value), where values were standardized in units of "number of trips in one year." For example, trip frequencies of once a year = 1, twice a year = 2, once a month = 12, once a week = 52 etc. Once every 2-5 years = 0.28. Once every 5+ years, first ever, and one-way = 0.05.

**Notes on the 2000/2007/2008 tables:** Similar data post-processing occurred in 2000 for these data. Additional steps were completed in 2007/8 so that the two databases have the same field names. The 2000 data were collected on paper surveys so there is greater variation in city and place names than with to the 2007/8 effort, which was completed using an electronic device with a drop-down menu of pre-defined locations.

## Other Data Available

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For more information about this database, visit the "Passenger Intercept Survey" webpage at: [theimtc.com](http://theimtc.com), or contact: Melissa Miller, Project Coordinator, Whatcom Council of Governments at (360) 676-6974.

Figure 1. TAZ map

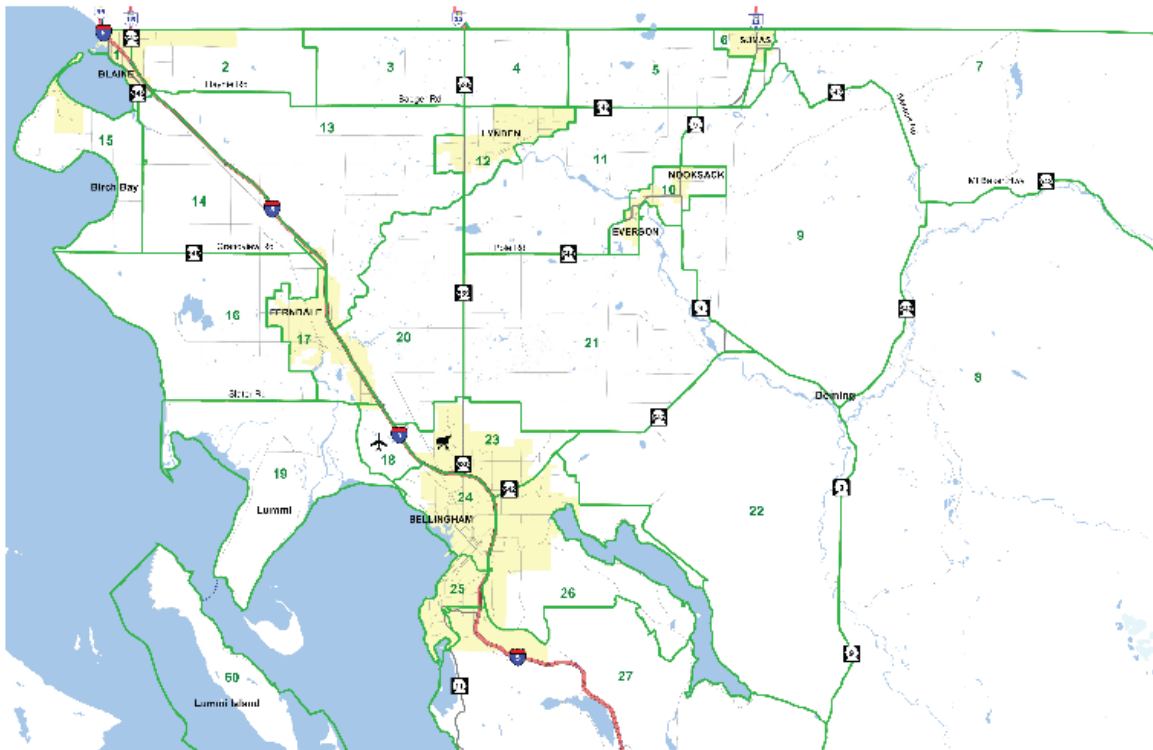
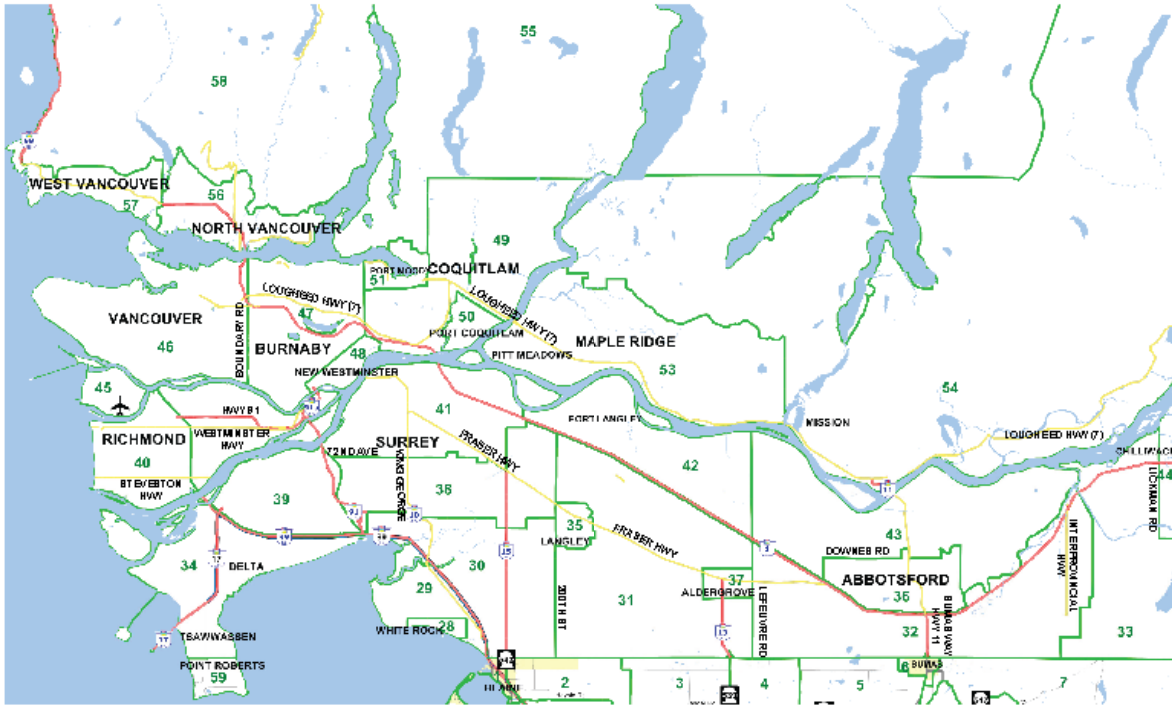


Figure 2. Superzone map

