## Appendix G : YLW Leakage Study 2016

## InterVISTAS

a company of Royal HaskoningDHV

## YLW Leakage Study 2016

March 2016

## Market Size Methodology

+ Market sizes have been estimated by the InterVISTAS Market Research \& Analysis group.
+ The following data sources are used as inputs when estimating Kelowna area origindestination markets sizes:
- Data representative of the major Global Distribution Systems (GDS) booking information.
- Schedule carrier capacity from Innovata.
- Airport site statistics.
- Data from national statistics agencies (e.g. Statistics Canada, US Department of Transportation etc.).
+ Estimates of the GDS share of total traffic by point-of-origin, country and carrier are constructed and these figures are applied to the specific itineraries in the MIDT and supplemental GDS data to estimate the total traffic for each itinerary record. The itineraries are then summarized to provide the appropriate origin-destination market size estimates.
+ Market sizes were derived from 2015 bookings data.
+ Markets were adjusted for seasonality using historical point-of-sale estimates.
- Summer market sizes are based on April - September averages.
- Winter market sizes are based on October - March averages.


## Leakage Model



## Catchment Area


$+\quad$ The Kelowna Airport catchment area has been divided into Primary and Secondary components.

+ The primary catchment area includes the region around Kelowna.
+ The secondary catchment areas includes passengers travelling to/from the Northwest, Northeast and South Okanagan.


## Airline Seat Capacity Considerations

+ To provide context when review the market size figures, the table below provides a general "rule of thumb" for passenger volumes required to support service for a range of aircraft types.

| Aircraft |  | Weekly Outbound Frequency | Annual Seats | Annual Passengers (assuming 80\% load factor) | ```Passengers Per Day Each Way (assuming 80% load factor)``` |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Type | Average Seat Configuration |  |  |  |  |
| Small Regional Turboprop | 18 | 1 | 1,872 | 1,498 | 2 |
|  | 18 | 3 | 5,616 | 4,493 | 6 |
|  | 18 | 5 | 9,360 | 7,488 | 10 |
|  | 18 | 7 | 13,104 | 10,483 | 14 |
| Small Regional Jet | 50 | 1 | 5,200 | 4,160 | 6 |
|  | 50 | 3 | 15,600 | 12,480 | 17 |
|  | 50 | 5 | 26,000 | 20,800 | 29 |
|  | 50 | 7 | 36,400 | 29,120 | 40 |
| Large Regional Jet/Turboprop | 75 | 1 | 7,800 | 6,240 | 9 |
|  | 75 | 3 | 23,400 | 18,720 | 26 |
|  | 75 | 5 | 39,000 | 31,200 | 43 |
|  | 75 | 7 | 54,600 | 43,680 | 60 |
| Narrow-body Jet | 140 | 1 | 14,560 | 11,648 | 16 |
|  | 140 | 3 | 43,680 | 34,944 | 48 |
|  | 140 | 5 | 72,800 | 58,240 | 80 |
|  | 140 | 7 | 101,920 | 81,536 | 112 |
| Wide-body Jet | 250 | 1 | 26,000 | 20,800 | 29 |
|  | 250 | 3 | 78,000 | 62,400 | 86 |
|  | 250 | 5 | 130,000 | 104,000 | 143 |
|  | 250 | 7 | 182,000 | 145,600 | 200 |

## Domestic Market Sizes

|  | Market Size - Full Catchment |  |  |  | Airport Share |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rank | City | Province | Annual Market Size | Passengers per Day Each Way | YLW | YKA | YVR | YYF | Other |
| 1 | Vancouver | BC | 439,806 | 602 | 62\% | 21\% | 0\% | 11\% | 6\% |
| 2 | Calgary | AB | 405,588 | 556 | 53\% | 23\% | 8\% | 9\% | 6\% |
| 3 | Edmonton | AB | 233,240 | 320 | 68\% | 17\% | 7\% | 1\% | 7\% |
| 4 | Toronto | ON | 183,117 | 251 | 71\% | 6\% | 14\% | 1\% | 8\% |
| 5 | Victoria | BC | 76,391 | 105 | 80\% | 7\% | 0\% | 4\% | 9\% |
| 6 | Winnipeg | MB | 60,350 | 83 | 72\% | 9\% | 8\% | 3\% | 8\% |
| 7 | Saskatoon | SK | 46,678 | 64 | 73\% | 10\% | 4\% | 5\% | 8\% |
| 8 | Prince George | BC | 41,811 | 57 | 65\% | 18\% | 5\% | 4\% | 7\% |
| 9 | Fort McMurray | AB | 41,733 | 57 | 73\% | 10\% | 8\% | 2\% | 8\% |
| 10 | Regina | SK | 32,719 | 45 | 65\% | 17\% | 4\% | 7\% | 7\% |
| 11 | Montreal | QC | 22,064 | 30 | 63\% | 10\% | 17\% | 3\% | 6\% |
| 12 | Whitehorse | YT | 21,227 | 29 | 80\% | 5\% | 5\% | 1\% | 8\% |
| 13 | Ottawa | ON | 20,859 | 29 | 66\% | 10\% | 12\% | 3\% | 8\% |
| 14 | Fort St. John | BC | 18,061 | 25 | 49\% | 25\% | 5\% | 14\% | 5\% |
| 15 | Terrace | BC | 16,098 | 22 | 52\% | 24\% | 10\% | 9\% | 5\% |
| 16 | Grande Prairie | AB | 12,343 | 17 | 65\% | 20\% | 1\% | 8\% | 7\% |
| 17 | Nanaimo | BC | 11,977 | 16 | 55\% | 22\% | 0\% | 17\% | 6\% |
| 18 | Cranbrook | BC | 9,230 | 13 | 71\% | 12\% | 0\% | 10\% | 7\% |
| 19 | Halifax | NS | 7,590 | 10 | 69\% | 11\% | 10\% | 3\% | 7\% |
| 20 | Smithers | BC | 7,166 | 10 | 41\% | 24\% | 17\% | 13\% | 4\% |
|  | Other |  | 73,359 | 100 | 56\% | 16\% | 18\% | 4\% | 6\% |
|  | Total |  | 1,781,408 | 2,440 | 63\% | 17\% | 6\% | 7\% | 7\% |

## Transborder Market Sizes

| Rank | Market Size - Full Catchment |  |  |  | Airport Share |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | City | State | Annual Market Size | Passengers per Day Each Way | YLW | YKA | YVR | YYF | BLI | Other |
| 1 | Las Vegas | NV | 82,791 | 113 | 75\% | 7\% | 6\% | 1\% | 3\% | 8\% |
| 2 | Los Angeles | CA | 45,016 | 62 | 65\% | 7\% | 19\% | 2\% | 1\% | 7\% |
| 3 | Phoenix | AZ | 41,047 | 56 | 78\% | 4\% | 10\% | 1\% | 0\% | 8\% |
| 4 | Seattle | WA | 21,593 | 30 | 82\% | 3\% | 4\% | 1\% | 3\% | 8\% |
| 5 | San Francisco | CA | 18,187 | 25 | 68\% | 6\% | 18\% | 1\% | 0\% | 7\% |
| 6 | Kahului | HI | 16,615 | 23 | 68\% | 11\% | 12\% | 1\% | 1\% | 7\% |
| 7 | Honolulu | Hi | 11,181 | 15 | 61\% | 8\% | 20\% | 1\% | 2\% | 6\% |
| 8 | San Diego | CA | 8,630 | 12 | 65\% | 5\% | 19\% | 1\% | 2\% | 7\% |
| 9 | Palm Springs | CA | 8,325 | 11 | 64\% | 10\% | 13\% | 1\% | 5\% | 6\% |
| 10 | Santa Ana | CA | 8,199 | 11 | 82\% | 1\% | 9\% | 0\% | 0\% | 9\% |
| 11 | Chicago | IL | 6,443 | 9 | 64\% | 6\% | 20\% | 2\% | 0\% | 7\% |
| 12 | Denver | CO | 6,390 | 9 | 65\% | 7\% | 19\% | 1\% | 1\% | 7\% |
| 13 | Dallas | TX | 6,149 | 8 | 68\% | 10\% | 13\% | 1\% | 1\% | 7\% |
| 14 | Orlando | FL | 6,129 | 8 | 65\% | 6\% | 20\% | 2\% | 0\% | 7\% |
| 15 | Portland | OR | 5,663 | 8 | 68\% | 9\% | 11\% | 2\% | 4\% | 7\% |
| 16 | Kona | HI | 5,172 | 7 | 77\% | 4\% | 10\% | 1\% | 0\% | 8\% |
| 17 | Fort Lauderdale | FL | 4,496 | 6 | 70\% | 9\% | 12\% | 2\% | 0\% | 7\% |
| 18 | Boston | MA | 4,304 | 6 | 72\% | 6\% | 13\% | 1\% | 0\% | 7\% |
| 19 | Salt Lake City | UT | 4,189 | 6 | 72\% | 5\% | 13\% | 1\% | 1\% | 8\% |
| 20 | New York | NY | 4,017 | 6 | 57\% | 11\% | 23\% | 3\% | 0\% | 6\% |
|  | Other |  | 76,654 | 105 | 67\% | 7\% | 15\% | 2\% | 2\% | 7\% |
|  | Total |  | 391,192 | 536 | 71\% | 7\% | 13\% | 1\% | 2\% | 7\% |

## International Market Sizes

|  | Market Size - Full Catchment |  |  | Airport Share |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rank | City | Annual Market Size | Passengers per Day Each Way | YLW | YKA | YVR | YYF | Other |
| 1 | Cancun | 27,804 | 38 | 76\% | 2\% | 14\% | 1\% | 7\% |
| 2 | Puerto Vallarta | 25,161 | 34 | 74\% | 3\% | 14\% | 0\% | 8\% |
| 3 | London | 16,631 | 23 | 63\% | 10\% | 17\% | 3\% | 7\% |
| 4 | San Jose del Cabo | 14,337 | 20 | 76\% | 4\% | 12\% | 0\% | 8\% |
| 5 | Varadero | 9,460 | 13 | 70\% | 7\% | 14\% | 1\% | 7\% |
| 6 | Sydney | 8,287 | 11 | 63\% | 13\% | 15\% | 2\% | 6\% |
| 7 | Frankfurt | 5,335 | 7 | 56\% | 14\% | 20\% | 3\% | 6\% |
| 8 | Amsterdam | 5,088 | 7 | 65\% | 4\% | 20\% | 4\% | 7\% |
| 9 | Delhi | 4,880 | 7 | 40\% | 7\% | 33\% | 17\% | 4\% |
| 10 | Hong Kong | 4,421 | 6 | 33\% | 5\% | 56\% | 3\% | 3\% |
| 11 | Paris | 4,254 | 6 | 56\% | 6\% | 29\% | 3\% | 6\% |
| 12 | Auckland | 3,899 | 5 | 53\% | 23\% | 11\% | 7\% | 6\% |
| 13 | Mexico City | 3,801 | 5 | 61\% | 5\% | 20\% | 7\% | 7\% |
| 14 | Brisbane | 3,781 | 5 | 68\% | 11\% | 13\% | 1\% | 7\% |
| 15 | Tokyo | 3,589 | 5 | 56\% | 8\% | 27\% | 2\% | 6\% |
| 16 | Zurich | 3,265 | 4 | 61\% | 14\% | 16\% | 2\% | 6\% |
| 17 | Bangkok | 2,893 | 4 | 65\% | 9\% | 17\% | 2\% | 7\% |
| 18 | Manila | 2,720 | 4 | 48\% | 9\% | 32\% | 6\% | 5\% |
| 19 | Seoul | 2,718 | 4 | 44\% | 12\% | 37\% | 3\% | 5\% |
| 20 | Beijing | 2,637 | 4 | 33\% | 8\% | 54\% | 2\% | 3\% |
|  | Other | 113,729 | 156 | 56\% | 9\% | 26\% | 3\% | 6\% |
|  | Total | 268,690 | 368 | 61\% | 8\% | 22\% | 2\% | 6\% |

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