



City of Flagstaff Retail Market Analysis

Prepared by
Tom Pippin and Scott Kitchens,
BBC Research & Consulting

Sponsored by
City of Flagstaff
and
Flagstaff Chamber
of Commerce



Flagstaff
City of Innovation



Table of Contents

- Research goals
- Methodology
- Step 1 – Define Trade Area
- Step 2 – Calculate Spending Power
- Step 3 – Calculate Leakage
- Step 4 – New Stores Needed
- Flagstaff Visitors
- Conclusions

Research Goals

- Determine what we would “expect” households located within the Flagstaff Retail Trade Area (FRTA) to spend each year on retail goods.
- Compare those “expected sales” with actual retail records provided by the City.
- Determine which retail categories earn more or less than the amount that we expect.
- For those retail categories that earn less than we expect, calculate the number of new stores that could be supported by households in the FRTA.

Methodology

- Using household counts provided by the City and detailed household expenditure estimates provided by the Bureau of Labor Statistics' Consumer Expenditure Survey (CES), we calculated the total annual retail purchases in 14 major retail categories that we “expect” to be made by households in the FRTA. The CES aggregates the daily spending records of thousands of U.S. households in great categorical detail. It is a highly respected source of “What are U.S. households buying?” data.
- We compared these expected categorical retail sales with actual retail sales records provided by the City.
- Those categories in which the City earned more than we expected were classified as “importers” while those that earned less than we expected we classified as “leakers”.

Methodology (cont.)

- For those retail categories that were “leakers”, we then used the dollar amount of leakage in each category to impute the number of new stores that are needed to accommodate those leaked retail sales.
- Using average store sizes and sales per square foot from the Urban Land Institute’s “Dollars and Cents of Shopping Centers – 2006”, we determined the average sales of each store type and calculated the number of new stores that could be supported by unmet consumer demand in the FRTA. “Dollars and Cents” is a compendium of statistics for retail establishments found in shopping centers around the United States. Average store size, average sales per square foot, and other useful metrics are compiled for hundreds of types of retail establishments, such as grocery stores, footwear, movie theatres, etc. It is a very well-respected source for such data.

Retail Leakage -- Definition

Retail Leakage is basically defined as local households using the Internet or driving elsewhere, to conduct their shopping. Instead of buying a retail good locally, they use Internet retailers or drive to another location to purchase said retail good. This could be due to a lack of local availability of the good they wish to buy, a better quality good found elsewhere or other similar reasons.

The exact opposite – households driving from another location to purchase goods locally – is referred to as retail importation.

We can estimate what categories of retail goods are leaked and imported using the methodology described on the prior slides.

Step 1 – Define Retail Trade Area

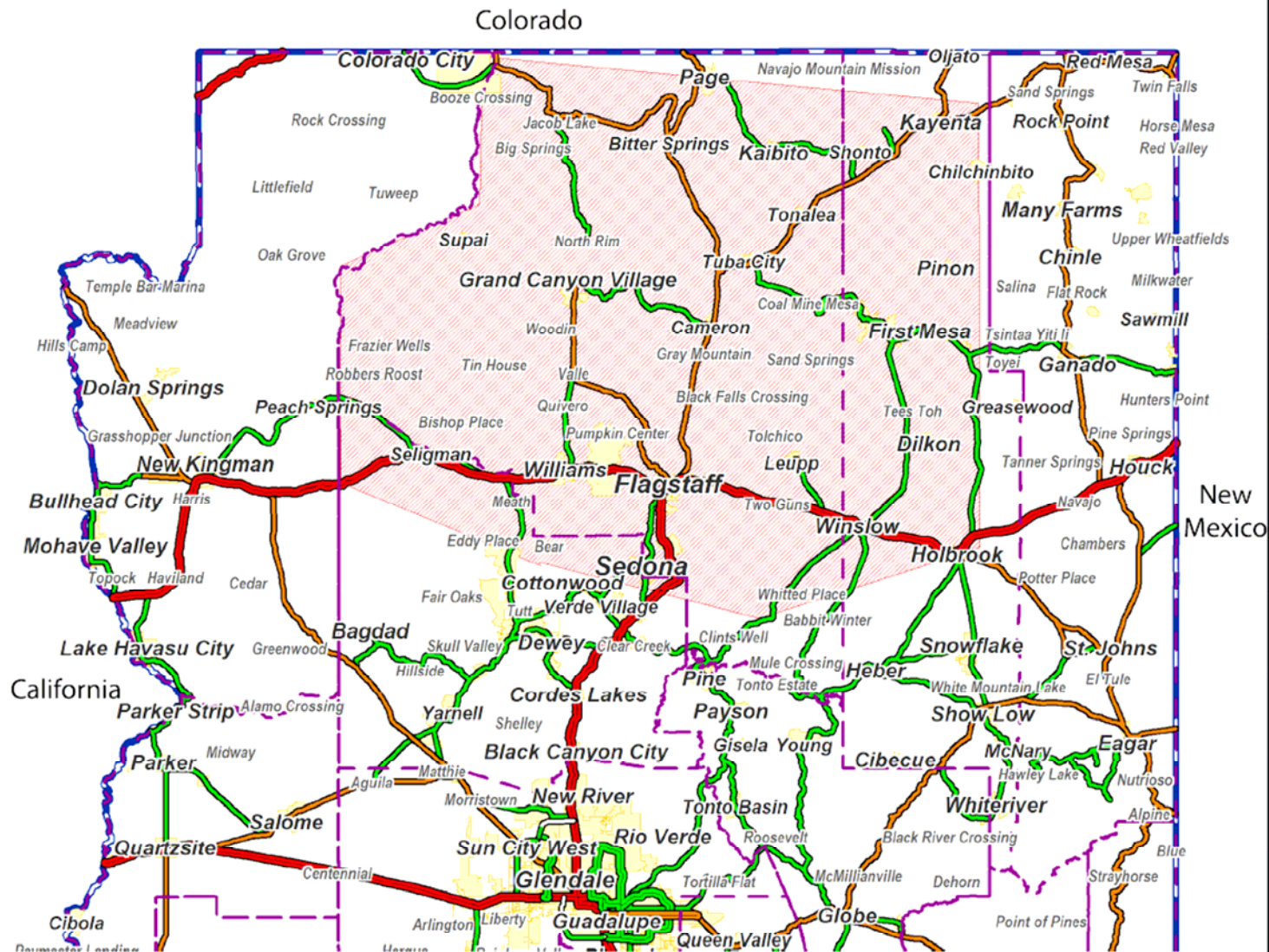
- Flagstaff is the regional retail hub of Northern Arizona.
- A large number of visitors pass through and lodge in the City en route to Grand Canyon National Park.
- The Flagstaff Retail Trade Area (FRTA) extends well north of the City to the Utah border.

Number of Households in FRTA, 2006-2008

	2006	2007	2008
Households	65,414	66,378	67,342

Source: City of Flagstaff Trade Area Analysis, 2008.

Step 1 – Map of Retail Trade Area



City of Flagstaff Retail Leakage Analysis

Step 2 – Spending Power

- Using the 2007 Urban Consumer Expenditure Survey, we were able to calculate the average annual household expenditures in 14 retail categories for the Western U.S.
- We then multiplied each of those annual expenditures by the number of households in the FRTA to calculate the total “expected” annual sales for each category based on the number of households in the FRTA.
- These “expected” retail sales per category would then later be compared to “actual” retail sales records provided by the City to determine which categories import sales and which categories export sales.

Step 2 – Spending Power 2006

2006	Average Annual Expenditures per Household ⁽¹⁾		Number of Households in Trade Area	=	"Expected" Annual Sales per Retail Category
Clothing	\$ 835.52	X	65,414	=	\$ 54,654,498
Shoes	\$ 206.38	X	65,414	=	\$ 13,500,443
Furniture/House Furnishings	\$ 813.90	X	65,414	=	\$ 53,240,261
Appliances	\$ 363.76	X	65,414	=	\$ 23,794,744
Toys/Gifts	\$ 91.55	X	65,414	=	\$ 5,988,710
Bookstores	\$ 82.53	X	65,414	=	\$ 5,398,480
Pets	\$ 291.61	X	65,414	=	\$ 19,075,606
Jewelry	\$ 80.43	X	65,414	=	\$ 5,261,145
Building Materials/Lumber	\$ 71.18	X	65,414	=	\$ 4,656,256
Restaurants	\$ 1,762.34	X	65,414	=	\$ 115,281,503
Grocery Stores/Bakeries ⁽²⁾	\$ 3,383.72	X	65,414	=	\$ 221,342,693
Auto Parts	\$ 190.59	X	65,414	=	\$ 12,467,348
Auto Dealerships	\$ 2,139.61	X	65,414	=	\$ 139,960,434
Sports and Recreational Equipment	\$ 91.95	X	65,414	=	\$ 6,014,556
TOTALS					\$ 680,636,678

(1) Based on 2007 CES, inflated/deflated to appropriate year based on Urban Consumer Price Index.

(2) Includes sales of liquor and pharmaceutical drugs.

Step 2 – Spending Power 2007

2007	Average Annual Expenditures per Household ⁽¹⁾		Number of Households in Trade Area	=	"Expected" Annual Sales per Retail Category
Clothing	\$ 869.77	X	66,378	=	\$ 57,733,794
Shoes	\$ 214.85	X	66,378	=	\$ 14,261,073
Furniture/House Furnishings	\$ 847.27	X	66,378	=	\$ 56,239,877
Appliances	\$ 378.67	X	66,378	=	\$ 25,135,366
Toys/Gifts	\$ 95.30	X	66,378	=	\$ 6,326,120
Bookstores	\$ 85.91	X	66,378	=	\$ 5,702,636
Pets	\$ 303.57	X	66,378	=	\$ 20,150,347
Jewelry	\$ 83.73	X	66,378	=	\$ 5,557,564
Building Materials/Lumber	\$ 74.10	X	66,378	=	\$ 4,918,595
Restaurants	\$ 1,834.59	X	66,378	=	\$ 121,776,592
Grocery Stores/Bakeries ⁽²⁾	\$ 3,522.45	X	66,378	=	\$ 233,813,388
Auto Parts	\$ 198.41	X	66,378	=	\$ 13,169,773
Auto Dealerships	\$ 2,227.33	X	66,378	=	\$ 147,845,961
Sports and Recreational Equipment	\$ 95.72	X	66,378	=	\$ 6,353,423
TOTALS					\$ 718,984,511

(1) Based on 2007 CES, inflated/deflated to appropriate year based on Urban Consumer Price Index.

(2) Includes sales of liquor and pharmaceutical drugs.

Step 2 – Spending Power 2008

2008	Average Annual Expenditures per Household ⁽¹⁾		Number of Households in Trade Area	=	"Expected" Annual Sales per Retail Category
Clothing	\$ 870.64	X	67,342	=	\$ 58,630,827
Shoes	\$ 215.06	X	67,342	=	\$ 14,482,654
Furniture/House Furnishings	\$ 848.11	X	67,342	=	\$ 57,113,699
Appliances	\$ 379.05	X	67,342	=	\$ 25,525,904
Toys/Gifts	\$ 95.40	X	67,342	=	\$ 6,424,412
Bookstores	\$ 86.00	X	67,342	=	\$ 5,791,241
Pets	\$ 303.87	X	67,342	=	\$ 20,463,432
Jewelry	\$ 83.81	X	67,342	=	\$ 5,643,914
Building Materials/Lumber	\$ 74.17	X	67,342	=	\$ 4,995,017
Restaurants	\$ 1,836.43	X	67,342	=	\$ 123,668,685
Grocery Stores/Bakeries ⁽²⁾	\$ 3,525.98	X	67,342	=	\$ 237,446,241
Auto Parts	\$ 198.60	X	67,342	=	\$ 13,374,397
Auto Dealerships	\$ 2,229.56	X	67,342	=	\$ 150,143,104
Sports and Recreational Equipment	\$ 95.81	X	67,342	=	\$ 6,452,139
TOTALS					\$ 730,155,666

(1) Based on 2007 CES, inflated/deflated to appropriate year based on Urban Consumer Price Index.

(2) Includes sales of liquor and pharmaceutical drugs.

Step 3 – Actual Retail Sales

- After calculating the “expected” retail sales in Flagstaff, we then examined the “actual” retail sales in the City.
- The following data was provided by the City’s Tax Administrator and is based on sales tax records.

Step 3 – Actual Retail Sales

Retail Category	2006	2007	2008
Clothing	\$ 33,767,900	\$ 34,411,300	\$ 29,089,700
Shoes	\$ 6,052,700	\$ 6,631,500	\$ 6,981,100
Furniture/House Furnishings	\$ 28,096,000	\$ 27,130,200	\$ 28,952,800
Appliances	\$ 14,631,700	\$ 17,983,100	\$ 28,688,300
Toys/Gifts	\$ 17,869,600	\$ 17,465,200	\$ 18,322,500
Bookstores	\$ 14,988,200	\$ 23,594,800	\$ 22,736,200
Pets	\$ 11,824,200	\$ 12,682,400	\$ 13,282,300
Jewelry	\$ 8,088,800	\$ 6,628,800	\$ 5,715,700
Building Materials/Lumber	\$ 175,695,300	\$ 150,172,600	\$ 129,884,400
Restaurants	\$ 189,321,900	\$ 189,526,800	\$ 187,054,900
Grocery Stores/Bakeries ⁽¹⁾	\$ 395,094,300	\$ 415,412,500	\$ 433,260,700
Auto Parts	\$ 74,551,100	\$ 75,849,200	\$ 65,081,300
Auto Dealerships	\$ 199,564,000	\$ 194,208,100	\$ 144,778,200
Sports and Recreational Equipment	\$ 23,784,800	\$ 24,615,800	\$ 24,025,700
TOTALS	\$ 1,193,330,500	\$ 1,196,312,300	\$ 1,137,853,800

(1) Includes sales of liquor and pharmaceutical drugs.

Data provided by City of Flagstaff.

Step 3 – Actual Retail Sales

- Flagstaff’s retail establishments in the 14 categories annually sold between approximately \$1.14 billion and \$1.20 billion of retail goods in 2006 through 2008.
- The “Grocery Stores/Bakeries” retail category sold the largest amount in each year, averaging close to \$415 million in annual retail sales over the 3-year period.
- These retail purchases were made by residents living in the FRTA as well as visitors and other out-of-area residents.

Step 3 – Leakage Analysis - 2006

Here we compare our “expected” sales with the City’s “actual” sales.

2006	"Expected" Annual Sales per Retail Category	"Actual" Annual Sales per Retail Category	Importation / (Leakage)
Clothing	\$ 54,654,498	\$ 33,767,900	\$ (20,886,598)
Shoes	\$ 13,500,443	\$ 6,052,700	\$ (7,447,743)
Furniture/House Furnishings	\$ 53,240,261	\$ 28,096,000	\$ (25,144,261)
Appliances	\$ 23,794,744	\$ 14,631,700	\$ (9,163,044)
Toys/Gifts	\$ 5,988,710	\$ 17,869,600	\$ 11,880,890
Bookstores	\$ 5,398,480	\$ 14,988,200	\$ 9,589,720
Pets	\$ 19,075,606	\$ 11,824,200	\$ (7,251,406)
Jewelry	\$ 5,261,145	\$ 8,088,800	\$ 2,827,655
Building Materials/Lumber	\$ 4,656,256	\$ 175,695,300	\$ 171,039,044
Restaurants	\$ 115,281,503	\$ 189,321,900	\$ 74,040,397
Grocery Stores/Bakeries ⁽²⁾	\$ 221,342,693	\$ 395,094,300	\$ 173,751,607
Auto Parts	\$ 12,467,348	\$ 74,551,100	\$ 62,083,752
Auto Dealerships	\$ 139,960,434	\$ 199,564,000	\$ 59,603,566
Sports and Recreational Equipment	\$ 6,014,556	\$ 23,784,800	\$ 17,770,244
TOTALS	\$ 680,636,678	\$ 1,193,330,500	\$ 512,693,822

Flagstaff “leaked” in the retail categories of Clothing, Shoes, Furniture, Appliances, and Pets in 2006.

Step 3 – Leakage Analysis - 2007

Here we compare our “expected” sales with the City’s “actual” sales.

2007	"Expected" Annual Sales per Retail Category	"Actual" Annual Sales per Retail Category	Importation / (Leakage)
Clothing	\$ 57,733,794	\$ 34,411,300	\$ (23,322,494)
Shoes	\$ 14,261,073	\$ 6,631,500	\$ (7,629,573)
Furniture/House Furnishings	\$ 56,239,877	\$ 27,130,200	\$ (29,109,677)
Appliances	\$ 25,135,366	\$ 17,983,100	\$ (7,152,266)
Toys/Gifts	\$ 6,326,120	\$ 17,465,200	\$ 11,139,080
Bookstores	\$ 5,702,636	\$ 23,594,800	\$ 17,892,164
Pets	\$ 20,150,347	\$ 12,682,400	\$ (7,467,947)
Jewelry	\$ 5,557,564	\$ 6,628,800	\$ 1,071,236
Building Materials/Lumber	\$ 4,918,595	\$ 150,172,600	\$ 145,254,005
Restaurants	\$ 121,776,592	\$ 189,526,800	\$ 67,750,208
Grocery Stores/Bakeries ⁽²⁾	\$ 233,813,388	\$ 415,412,500	\$ 181,599,112
Auto Parts	\$ 13,169,773	\$ 75,849,200	\$ 62,679,427
Auto Dealerships	\$ 147,845,961	\$ 194,208,100	\$ 46,362,139
Sports and Recreational Equipment	\$ 6,353,423	\$ 24,615,800	\$ 18,262,377
TOTALS	\$ 718,984,511	\$1,196,312,300	\$ 477,327,789

Flagstaff “leaked” in the retail categories of Clothing, Shoes, Furniture, Appliances, and Pets in 2007.

Step 3 – Leakage Analysis - 2008

Here we compare our “expected” sales with the City’s “actual” sales.

2008	"Expected" Annual Sales per Retail Category	"Actual" Annual Sales per Retail Category	Importation / (Leakage)
Clothing	\$ 58,630,827	\$ 29,089,700	\$ (29,541,127)
Shoes	\$ 14,482,654	\$ 6,981,100	\$ (7,501,554)
Furniture/House Furnishings	\$ 57,113,699	\$ 28,952,800	\$ (28,160,899)
Appliances	\$ 25,525,904	\$ 28,688,300	\$ 3,162,396
Toys/Gifts	\$ 6,424,412	\$ 18,322,500	\$ 11,898,088
Bookstores	\$ 5,791,241	\$ 22,736,200	\$ 16,944,959
Pets	\$ 20,463,432	\$ 13,282,300	\$ (7,181,132)
Jewelry	\$ 5,643,914	\$ 5,715,700	\$ 71,786
Building Materials/Lumber	\$ 4,995,017	\$ 129,884,400	\$ 124,889,383
Restaurants	\$ 123,668,685	\$ 187,054,900	\$ 63,386,215
Grocery Stores/Bakeries ⁽²⁾	\$ 237,446,241	\$ 433,260,700	\$ 195,814,459
Auto Parts	\$ 13,374,397	\$ 65,081,300	\$ 51,706,903
Auto Dealerships	\$ 150,143,104	\$ 144,778,200	\$ (5,364,904)
Sports and Recreational Equipment	\$ 6,452,139	\$ 24,025,700	\$ 17,573,561
TOTALS	\$ 730,155,666	\$1,137,853,800	\$ 407,698,134

Flagstaff “leaked” in the retail categories of Clothing, Shoes, Furniture, Pets and Auto Dealerships in 2008.

Step 3 – Leakage Analysis

- Overall, Flagstaff is an importer. This makes sense – the large number of visitors to the Grand Canyon purchase goods in the Flagstaff area and the City generates more retail sales than would be expected based on the number of households in the FRTA.
- However, Flagstaff “leaked” sales in the retail categories of Clothing, Shoes, Furniture, and Pets in 2006-2008, in the retail category of Appliances in 2006 and 2007 and in the retail category of auto dealerships in 2008.
- This indicates that retail purchases in each of those categories that *should* be made in Flagstaff are in fact being made elsewhere.
- Based on this leakage, we were able to calculate the number of stores warranted by that unmet consumer demand.

Step 4 – New Stores Needed

Using the Urban Land Institute’s “Dollars and Cents of Shopping Centers – 2006”, we obtained the average size (sq. ft.) and sales per square foot for stores in each of the “leaking” retail categories.

Retail Category	Square Feet per Store ⁽¹⁾		Median Annual Retail Sales per Square Foot ⁽²⁾	=	Average Annual Total Retail Sales per Store
Clothing	27,079	X	\$ 322.38	=	\$ 8,729,728
Shoes	25,314	X	\$ 149.36	=	\$ 3,780,899
Furniture/House Furnishings	51,040	X	\$ 227.64	=	\$11,618,746
Appliances ⁽³⁾	52,207	X	\$ 230.00	=	\$12,007,610
Pets	26,471	X	\$ 190.10	=	\$ 5,032,137
New and Used Automobiles ⁽⁴⁾	n/a	X	n/a	=	\$31,855,768

1) Represents median or upper-decile value for each category.

2) Median sales per square foot for 2006. We have inflated these estimates based for 2007 and 2008 based on Urban Consumer Price Index.

3) Professional estimates based on our prior experience with retail shopping centers.

4) Sales per dealership from National Auto Dealership Association.

Step 4 – New Stores Needed

We then divided the total “leakage” for each retail category by the average annual total sales per store to calculate the number of new stores needed to accommodate unmet consumer demand in the FRTA.

Retail Category	2006		2007		2008		Average Number of Stores Warranted
	Retail Sales Leakage	Stores Warranted	Retail Sales Leakage	Stores Warranted	Retail Sales Leakage	Stores Warranted	
Clothing	\$ (20,886,598)	2.4	\$ (23,322,494)	0.7	\$ (29,541,127)	0.8	1.3
Shoes	\$ (7,447,743)	2.0	\$ (7,629,573)	1.9	\$ (7,501,554)	1.9	1.9
Furniture/House Furnishings	\$ (25,144,261)	2.2	\$ (29,109,677)	2.4	\$ (28,160,899)	2.3	2.3
Appliances	\$ (9,163,044)	0.8	\$ (7,152,266)	0.6	\$ -	N/A	0.7
Pets	\$ (7,251,406)	1.4	\$ (7,467,947)	1.4	\$ (7,181,132)	1.4	1.4
Auto Dealerships	\$ -	N/A	\$ -	N/A	\$ (5,364,904)	0.2	0.2

The far right column displays the average number of new stores needed in Flagstaff based on the past three years of retail sales. For example, Flagstaff needs 1.4 new “Pets” stores to fully accommodate local consumer demand for goods sold at such stores.

Auto Dealerships

- We believe the results of our analysis for Flagstaff auto dealerships overestimate the amount of importation such stores generate.
- Flagstaff auto dealers report a sales ratio of 40% cars/60% trucks, whereas nationally, stores report a sales ratio of 60% cars/40% trucks.
- Trucks are generally \$10,000 to \$15,000 more expensive than cars.
- As Flagstaff auto dealerships sell more trucks at a higher cost than the national average, their “actual sales” will be artificially inflated when compared to our “expected sales”.
- Based on this data and personal discussions with Flagstaff auto dealers, we believe Flagstaff actually “leaks” automobile sales to surrounding communities and could benefit from additional auto dealerships in the City.

Flagstaff Visitors

- Millions of visitors from around the United States (as well as the world) annually shop and lodge in Flagstaff while visiting the Grand Canyon National Park and other area attractions.
- Our prior analysis only considered retail spending by full-time residents of the FRTA. What impact would visitors have on our leakage analysis?
- Using annual visitor estimates and average lengths of stay provided by the City, we estimated that the approximately 3.0 million annual Flagstaff visitors are equivalent to an additional 8,700 full-time resident households.
- We then applied the same methodology used in our prior analysis, only for visitors we removed retail categories in which visitors are less likely to shop, such as Furniture/Home Furnishings, Appliances and Pets.

Flagstaff Visitors – New Stores Needed

Inclusion of visitors in our analysis resulted in additional leakage in the retail categories of Clothing and Shoes. The remaining three retail categories were not affected as we did not expect visitors to shop at such stores.

Retail Category	2006		2007		2008		Average Number of Stores Warranted
	Retail Sales Leakage	Stores Warranted	Retail Sales Leakage	Stores Warranted	Retail Sales Leakage	Stores Warranted	
Clothing	\$ (28,179,284)	3.2	\$ (30,914,742)	0.9	\$ (37,140,968)	1.1	1.7
Shoes	\$ (9,249,275)	2.4	\$ (9,504,968)	2.4	\$ (9,378,823)	2.4	2.4
Furniture/House Furnishings	\$ (25,144,261)	2.2	\$ (29,109,677)	2.4	\$ (28,160,899)	2.3	2.3
Appliances	\$ (9,163,044)	0.8	\$ (7,152,266)	0.6	\$ -	N/A	0.7
Pets	\$ (7,251,406)	1.4	\$ (7,467,947)	1.4	\$ (7,181,132)	1.4	1.4
Auto Dealerships	\$ -	N/A	\$ -	N/A	\$ (5,364,904)	0.2	0.2

Construction of the calculated number of additional stores in each retail category would satisfy unmet consumer demand by existing residents in the FRTA as well as Flagstaff visitors.

Conclusions

Based on the preceding analysis, we have concluded that unmet consumer demand warrants the construction of the following new retail establishments within the City.

Without Visitors

Retail Category	Average Number of Stores Warranted
Clothing	1.3
Shoes	1.9
Furniture/House Furnishings	2.3
Appliances	0.7
Pets	1.4
Auto Dealerships	0.2

With Visitors

Retail Category	Average Number of Stores Warranted
Clothing	1.7
Shoes	2.4
Furniture/House Furnishings	2.3
Appliances	0.7
Pets	1.4
Auto Dealerships	0.2

Existing residents of the FRTA and visitors who shop for these goods elsewhere could likely begin purchasing such goods in Flagstaff if these new stores are constructed.

Conclusions

What types of merchandise would these new retailers need to carry?

The following pie chart show a potential product distribution for clothing stores based on typical household spending patterns.

