IAFWA-ASA Data Mining Project

Initial Ohio Findings

October 23, 2006

This analysis, funded by a Sport Fish Restoration multi-state conservation grant awarded jointly to the Association of Fish and Wildlife Agencies (AFWA) and the American Sportfishing Association (ASA), is designed to help Ohio better understand the actions that can be taken to increase fishing participation and licenses revenues. This report represents the first step, which is an initial review of Ohio's fishing license data by Southwick Associates, Inc., the grant's subcontractor. The results are intended to help Ohio understand basic license sales trends, and generate questions for additional investigation. The second step will be a second round of data analysis based on directions provided by Ohio. We encourage Ohio to consider its current or potential future marketing efforts when reviewing this document. The second round of analysis will seek insights supporting those efforts. Southwick Associates, Inc. will be available by phone or email to answer any questions (904-277-9765, rob@southwickassociates.com).

The analysis below is based primarily on residents of Ohio. The data had some quality issues with the gender information therefore questionable data is labeled as Unknown. All of the license data that was provided was used in this analysis. The tables primarily focus on residents who bought a resident license for fishing between 2001 and 2005. In these tables the license year of 2000-2001 is labeled as 2001.

Table of Contents

Section 1: Basic License Sales Information

Tables 1 through 4 present initial information regarding Ohio's 2005 license sales for all buyers. This is a basic look at Ohio's license sales, which mirrors the examinations traditionally available prior to the advent of electronic license systems.

Table 1. 2005 Licenses Sales, by Type of Licenses Sold
Resident and Non-Resident

License	Percent
Annual Fishing License (100)	74.8%
Annual Resident Senior Free Fishing License (800)	12.8%
1-Day Fishing License (140)	5.5%
Non-Resident 3-Day Fishing License (120)	3.2%
Non-Resident Annual Fishing License (110)	3.2%
Annual Resident Senior Reduced-Cost Fishing License (5)	0.4%

Table 2. 2005 License Distribution

	Percent
Resident	87.7%
Non-Resident	12.3%

Table 3. 2005 Licenses Sold by Gender

	Resident	Non-Resident
Female	16.2%	0.6%
Male	68.1%	4.3%
Unknown	3.3%	7.5%

Table 4. 2005 Age of License Buyers at Time of Purchase

Age	All Buyers	Non Resident	Resident
16 and under	1.4%	1.2%	1.4%
17 to 19	4.3%	3.3%	4.4%
20 to 29	15.9%	14.2%	16.1%
30 to 39	19.7%	20.5%	19.6%
40 to 49	22.2%	24.6%	21.9%
50 to 59	16.0%	19.4%	15.5%
60 to 69	11.8%	11.7%	11.8%
70 and older	8.7%	5.0%	9.3%
Total	**100.0%**	**100.0%**	**100.0%**

Tables 1-4 above give us a general one-year picture of license sales in Ohio, but nothing very detailed, nothing new, and nothing that permits a focused marketing effort. Next, we will go into more detail by looking at multi-year trends.

Section 2: Licenses Sold, 2001-2005

By looking at multiple years of data, we can identify license sales trends.

Table 5. License Sales Trends, 2001-2005 (Y axis = the percentage within the weighted sample of license <u>buyers</u> for the years 2001-2005)

	2001	2002	2003	2004	2005
Resident Male	12.8%	11.8%	13.4%	13.1%	12.7%
Resident Female	3.0%	2.4%	3.3%	3.2%	3.0%
Resident Unknown	1.8%	3.9%	0.7%	0.7%	0.6%
Non-Resident Male	1.1%	1.0%	1.0%	1.0%	0.8%
Non-Resident Female	0.2%	0.1%	0.2%	0.1%	0.1%
Non-Resident Unknown	1.8%	1.7%	1.6%	1.4%	1.4%
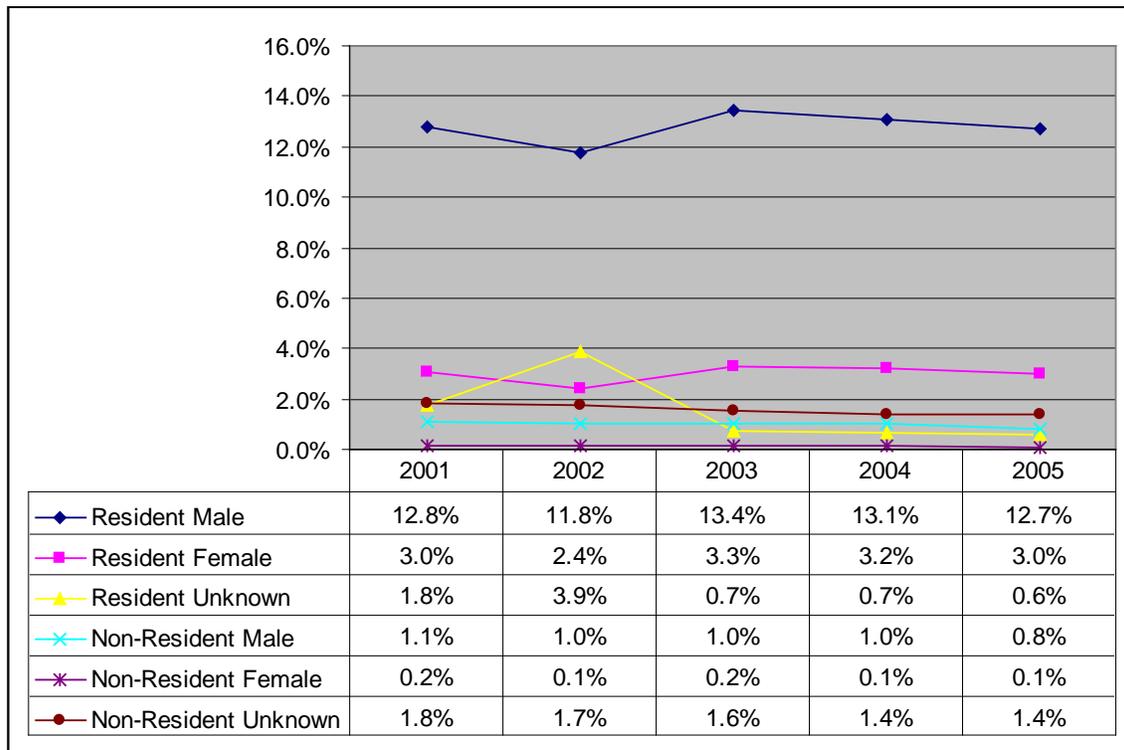
The number of license buyers have declined since 2002. The 2002 plotted data are affected by a high number of resident records with the gender unknown. According to data supplied by the Ohio Division of Wildlife, the number of licenses sold have been declining since a recent years peak in fiscal year 2001-2002.

Even though overall sales show slight declines, there must be customer segments experiencing increases while others have above-average declines. Which segments are these?

3

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Section 3: Lifestyle Analyses

People's preferences are likely to vary based on income, age, urban/rural lifestyle, where they are in life (single, family, empty-nest, retired, etc.) and more. This type of information is not available from the typical statistics provided by Ohio's electronic license database. To gain a better understanding of who is more likely to buy or not buy a license, we use TAPESTRY® lifestyle data.[1]

ESRI of Arlington, VA provides the TAPESTRY® data service. TAPESTRY® is built from Census Bureau data and other sources. From the ESRI website: "The Community Tapestry segmentation system provides an accurate, detailed description of America's neighborhoods. U.S. residential areas are divided into 65 segments based on demographic variables such as age, income, home value, occupation, household type, education, and other consumer behavior characteristics." Using the ESRI service, we appended the complete set of data for purchasers of Ohio license purchasers with TAPESTRY® information. The resulting information explains the lifestyle typical to people who live on the same block or local neighborhood as the license purchaser. The appended data allow us to learn more about the lifestyles of people who purchase fishing licenses and gain a better understanding of who does and does not buy fishing licenses. The results will allow Ohio to better understand the license buying market and to become more focused and cost-effective in its marketing and recruitment programs.

TAPESTRY® divides the public into 12 major groupings called "LifeModes," each of which has sub-groupings referred herein as "segments." In all, there are 65 segments available. We give abbreviated descriptions of each LifeMode and segment when first presented, but encourage the reader to review the attached .pdf for more complete descriptions.

Who is Likely to Buy a Fishing License?

Let's take an initial look at the top license-purchasing LifeMode categories in 2005. These are ranked based on the number of licenses purchased by each in 2005. Table 6 ranks the resident LifeMode groups from the largest group of buyers to the least. The rank is based on total buyers from 2001 through 2005 and is used consistently throughout this report.

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[1] Other equally good sources of similar data are available, such as Claritas®.

Table 6. Sales by LifeMode Categories, 2005,
Ranked from Largest Purchasers to Least, Residents

LifeMode Groups	% of State Pop.	% of 2006 Buyers	Cumulative %	Description
Factories and Farms	22.7%	23.9%	23.9%	Small towns often in America's breadbasket states, lower income, married, employed in ag & manufac.
Upscale Avenues	16.9%	17.4%	41.3%	Above average income
Traditional Living	15.9%	16.4%	57.7%	Hard working, modest income families, older towns losing kids to newer cities and growth areas
Senior Styles	14.9%	14.6%	72.3%	Retirees, average income, depend soc sec & pensions
High Society	8.4%	8.0%	80.3%	Fastest growing group, highest income, married
American Quilt	6.5%	6.2%	86.5%	Small towns/rural, modest income, blue-collar or rural nearing retirement, modest or mobile homes
High Hopes	4.3%	4.1%	90.6%	Young, college educated, single or married w/out kids
Metropolis	2.8%	2.8%	93.4%	City families, row houses & public transportation
Family Portrait	2.9%	2.6%	95.9%	Generally younger families, homeowners
Global Roots	2.3%	2.1%	98.0%	Ethnically diverse, recent immigrants, want to improve
Solo Acts	1.9%	1.6%	99.6%	Young, educated, city life
Scholars & Patriots	0.6%	0.4%	100.0%	Youthful, lower income, in college or military

In general, the population of Ohio fishing license buyers reflects the overall state population, with some differences. The first four LifeMode groups comprise nearly three-quarters of 2004-2005 license customers. They come from small towns, groups with modest to above average incomes, and retirees. The first three groups are more likely to buy a license compared to the average state resident (column #3 compared to column #2). Members of the "Factories and Farms" are not only more likely to buy a license than the average Ohio resident, but by far buy more licenses than any other group and possesses nearly one quarter of the total Ohio license market. On the other hand, younger and single people, such as the "Scholars & Patriots" and "Solo Acts", plus immigrant communities, are least likely to buy a license compared to the average resident and make up a very small share of the license market.

The LifeMode categories presented in Table 6 provide an initial look at Ohio's anglers, and there are greater details available. Let's take a look at the top license-purchasers by TAPESTRY® segments from 2001 to 2005. These are ranked based on the number of licenses purchased by each segment for all five years. Table 7 is long and detailed, and summary discussions follow.

Table 7. 2001-2005 License Sales by Segment, Residents
ranked by market share ('% of 2001-2005 License Sales')

Rank	Tapestry Segment	LifeMode Groups	% of 2001-2005 License Buyers	Cumulative %	% of State Pop.	Description
1	Salt of the Earth	Factories and Farms	13.07%	13.07%	12.09%	Two-thirds are married with kids, blue collar, avg income, Midwestern, often rural, own single family homes, conservative
2	Rustbelt Traditions	Traditional Living	10.28%	23.35%	9.64%	Older Great lakes industrial cities, avg age = 36, mix of married or single, slightly below avg income, don't move much, forego fads
3	Green Acres	Upscale Avenues	8.26%	31.61%	7.92%	Married w/ kids, blue collar baby boomers with college ed., Above average income, suburban fringe, do-it-yourselfers, outdoors
4	Rustbelt Retirees	Senior Styles	6.03%	37.64%	5.80%	Married/no kids, avg income, Great Lakes & Northeast, own homes, not inclined to move, loyal to community & country, gets involved
5	Cozy and Comfortable	Upscale Avenues	5.91%	43.55%	5.70%	Older suburban areas, middle aged, married, older kids, use computers, above avg income, not really do-it-yourselfers
6	Southern Satellites	Factories and Farms	5.25%	48.79%	4.98%	Primarily found in rural South, 37 yrs, most married, some with kids, below avg income, 1/3 without diploma, fishing, NASCAR
7	Home Town	Factories and Farms	5.01%	53.80%	4.72%	Young, tend to remain in hometown, low avg income, some married, 1/3 without diploma, suburban but prefer country lifestyle
8	Prosperous Empty Nesters	Senior Styles	2.87%	56.67%	2.75%	½ over 55, kids moved out, above avg income, still working, suburban, physically active, investors
9	Midlife Junction	Traditional Living	2.80%	59.48%	2.87%	Exiting child-rearing, mix married & single, slightly below avg income, 33% live in apts, suburban, conservative, budget-conscious
10	Great Expectations	High Hopes	2.80%	62.28%	2.82%	Young singles & married couples, lower income & growing, many rent, music taste varies: MTV to country, like outdoor sports
11	Heartland Communities	Senior Styles	2.74%	65.02%	2.89%	Above avg age, married, modest income, small Midwest towns, hunt/fish/bowl, country music, do-it-yourselfers
12	Main Street, USA	Traditional Living	2.67%	67.69%	2.66%	Suburbs of smaller metro areas in older homes, avg age= 36, ½ married, slightly above avg income, service/manufacturing
13	Exurbanites	High Society	2.52%	70.21%	2.55%	Affluent, likes open space on urban edge, married/empty nesters, golf, kayakers, active in volunteer groups and donate to causes
14	Midland Crowd	American Quilt	2.43%	72.65%	2.58%	Avg age=36, married, ½ with kids, typical income, new housing in rural areas, blue collar, conservative, likes Fords & fishing
15	Sophisticated Squires	High Society	2.31%	74.96%	2.52%	Country living on urban fringe, above avg income, 35-54, SUVs, married w/ kids, golf
16	Rooted Rural	American Quilt	2.21%	77.16%	2.24%	Slightly older, rural, empty-nesters, lower income, less likely to have college experience, trucks, do-it-yourselfers
17	In Style	Upscale Avenues	1.79%	78.95%	1.92%	Suburb living/prefers city lifestyles, married/no kids, age=38, higher income, tech savvy, rock music, health oriented
18	Simple Living	Senior Styles	1.54%	80.49%	1.56%	Older, ½ single, kids rare, low income, ¼ didn't finish high school, community is important
19	City Dimensions	Global Roots	1.42%	81.91%	1.44%	Young, 2/3's single, many single parents, low income, urban, lack education, renters, frequent moves, dense neighborhoods

Rank	Tapestry Segment	LifeMode Groups	% of 2001-2005 License Buyers	Cumulative %	% of State Pop.	Description
20	Up and Coming Families	Family Portrait	1.35%	83.26%	1.62%	Fast growing segment, avg age = 32, married with kids, affluent, own home on suburban fringe, little time, fast food.
21	Aspiring Young Families	High Hopes	1.34%	84.59%	1.46%	Young start-up families, married or divorced, typical age=30, 22% with degrees, ½ rent, live in growing metro areas, avg income
22	Boomburbs	High Society	1.26%	85.86%	1.49%	Younger families with busy upscale lifestyle, two incomes, college ed., homeowners, into computers & tech, CNN, Discovery channel
23	Metro City Edge	Metropolis	1.18%	87.04%	1.14%	Many single parent families (1/3 married households), older children at home, below avg education & income, high unemployment
24	Modest Income Homes	Metropolis	1.06%	88.09%	1.01%	Mostly young singles & single parents, many grandparents raising kids, low income, low valued homes, 1/2 rent
25	Old and Newcomers	Solo Acts	0.94%	89.04%	1.05%	In transition-starting careers or retiring, renters, more single person and shared households, few families, lower income
26	Suburban Splendor	High Society	0.93%	89.97%	1.06%	Maturing families, very affluent, dual incomes, avg age=40, younger neighborhoods (but not new), like to invest
27	Crossroads	American Quilt	0.92%	90.89%	1.03%	Married couples/single parents, 32 years, below avg income, smaller towns, mobile homes common, above avg unemployment
28	Enterprising Professionals	Upscale Avenues	0.90%	91.79%	1.05%	Young, highly educated, single or recently married. Above average income, rent, mobile, tech savvy, likes to travel
29	Milk and Cookies	Family Portrait	0.84%	92.63%	0.92%	Young families but affluent for their age, two incomes, prefer single-family homes, focused on families & future, leisure time = kid time
30	Retirement Communities	Senior Styles	0.83%	93.46%	0.87%	Retired, ½ single, below avg income, ½ own single-family homes/others in multi-unit places, live in metro areas, health conscious
31	Family Foundations	Traditional Living	0.76%	94.22%	0.70%	Mostly African-American, slightly older families, active in community, average income, urban.
32	Rural Bypasses	Factories and Farms	0.71%	94.94%	0.82%	Rural, low income & education, trucks, fishing, NASCAR, mostly white & 1/3 African-American.
33	Rural Resort Dwellers	American Quilt	0.71%	95.64%	0.66%	Rural non-farm, married/kids moved out, typically older, avg income, boats/fish/hunt
34	Metropolitans	Metropolis	0.54%	96.18%	0.61%	City living, older neighborhoods, single or childless couples, educated, slightly above average income, mobile, homeowners
35	Young and Restless	Solo Acts	0.42%	96.60%	0.54%	Avg age=29, most are single, educated but income < avg. Renters, women more likely to work, metro areas, tech savvy.
36	Inner City Tenants	Global Roots	0.40%	97.00%	0.48%	Ethnically diverse, urban, 27 years=avg, single, lower than average income, college is a goal, rents, not outdoorsy.
37	Social Security Set	Senior Styles	0.39%	97.39%	0.40%	Mostly elderly, most live alone, ethnically diverse, very low income, apartment renters in high-rise urban locations, few recreation $
38	Connoisseurs	High Society	0.37%	97.76%	0.43%	Very high incomes, slightly older, slightly older & many still with kids, live in dense city centers, liberal, travel, like to spend
39	City Commons	Family Portrait	0.34%	98.10%	0.35%	Young, single or single parents in urban areas. Mostly African American. Blue collar, service-oriented employment. Low income, low rent.

Rank	Tapestry Segment	LifeMode Groups	% of 2001-2005 License Buyers	Cumulative %	% of State Pop.	Description
40	College Towns	Scholars & Patriots	0.30%	98.40%	0.35%	Avg age=24.3, almost ½ enrolled in college & others on staff, part-time jobs, low income, renters or some in dormitories.
41	Senior Sun Seekers	Senior Styles	0.24%	98.63%	0.37%	Older, growing segment, many are winter snow-birds & go south, education levels are below avg, over half receive social security.
42	Las Casas	Global Roots	0.23%	98.86%	0.19%	Newest Western immigrants, young, 62% married (above avg), $35K income, mostly skilled workers, large household size.
43	Wealthy Seaboard Suburbs	High Society	0.19%	99.05%	0.23%	Coastal metro areas, age=40's, white, few kids, high income & high wealth, professionals, travels, seldom moves
44	Urban Chic	Upscale Avenues	0.15%	99.21%	0.20%	Professional, urban couples, less than ½ with kids, 41 yrs, above avg income, uptown living (highrises) common, prefer city life
45	Metro Renters	Solo Acts	0.15%	99.36%	0.22%	Urban, young, educated & single, slightly above avg income & rising, internet savvy, have disposable income, ethnically diverse
46	Dorms to Diplomas	Scholars & Patriots	0.13%	99.49%	0.17%	College students, youngest Tapestry segment. 3/4's hold part-time jobs. 1/2 live in dorms.
47	Prairie Living	Factories and Farms	0.09%	99.57%	0.13%	Midwest small farms mostly, avg age = 40, married, half have kids, typical income, pets, country music, hunts and fish
48	Pleasant-ville	Upscale Avenues	0.08%	99.66%	0.13%	Slightly older, families with kids, above average income, urban/suburban, long commutes common, moves infrequently
49	Industrious Urban Fringe	Global Roots	0.08%	99.74%	0.11%	Family is key. Largely hispanic, many foreign born, live on city's edge, avg. income, commonly owns home. Thrifty.
50	Silver and Gold	Senior Styles	0.07%	99.80%	0.15%	These are the wealthiest & older seniors, commonly live on the outer edge of suburbs, like to travel, active, seek sunshine
51	Top Rung	High Society	0.05%	99.86%	0.07%	Mature, married, well educated and wealthy. Live in coastal urban areas, travel frequently. Home values near $1 million.
52	Laptops and Lattes	Solo Acts	0.04%	99.90%	0.06%	Avg age = 38, mostly single, live in urban centers, affluent, cosmopolitan, educated, rents, traveled and tech savvy.
53	Urban Villages	Family Portrait	0.03%	99.93%	0.03%	Multicultural areas, young families, in dense urban centers, 40% with no diploma, often hispanic, older single-family homes
54	City Strivers	Metropolis	0.02%	99.95%	0.03%	Live in dense urban areas, 38 yrs, generally above avg income, families/singles and culture types, most in apts, not outdoorsy
55	Urban Rows	Metropolis	0.02%	99.97%	0.02%	Smalles tapestry segment & shrinking due to urban renewal programs. 70% black with many black hispanics. 1/2 = single parent households. Urban.
56	The Elders	Senior Styles	0.02%	99.98%	0.09%	Oldest Tapestry segment (73 years = avg), 96% white, growing in numbers, senior communities, golf, travel, above avg wealth
57	Military Proximity	Scholars & Patriots	0.01%	99.99%	0.04%	Young, married, embracing parenthood, second youngest Tapestry segment, 3/4's active duty or work on bases. Above avg education.
58	Trendsetters	Solo Acts	0.01%	100.00%	0.03%	Young, single, culturally diverse, above average income, educated. Most rent. Live the urban life style.
59	City Lights	Metropolis	0.00%	100.00%	0.01%	Live in dense urban areas, 38 yrs, generally above avg income, families/singles and culture types, most in apts, not outdoorsy

Rank	Tapestry Segment	LifeMode Groups	% of 2001-2005 License Buyers	Cumulative %	% of State Pop.	Description
60	NeWest Residents	Global Roots	0.00%	100.00%	0.01%	Over 1/2 foreign born, largely hispanic, urban, renters in mid-to-high rise apts. Low education rates but modest (not low) income.
61	High Rise Renters	Global Roots	0.00%	100.00%	0.00%	Diverse race and ethnic mix, younger (29 yrs), low income, lots in NYC, rent in medium to high rises
62	International Marketplace	Global Roots	0.00%	100.00%	0.02%	Young families, many immigrants, ethnically diverse, common to NY and LA, lower income than urban villages.

The above table gives us a better picture of Ohio's license buyers. The segments highlighted in yellow are major sources of license sales and show a significantly greater-than-average tendency to buy licenses. These highlighted segments are rural or from older neighborhoods, families, typically blue collar with average to below-average income (only 22% of these top segments show above-average incomes). The young-educated-urban or ethically diverse types do not appear in the top segments. This does not mean these people will not fish in the future, but at this stage in their lives, fishing is not a common activity.

Where Do We Find Residents More or Less Likely to Buy Licenses?

Table 8 below lists all Tapestry® segments recorded as having bought a license in Ohio between 2001 and 2005, for residents only. The third column presents the larger LifeMode group each segment belongs to, and the fourth column presents the urban-rural areas where the segments are generally located. The fifth column presents the trend in the actual, or real, number of licenses sold to each segment from 2001 through 2005. For example, the number of licenses purchased by the top ranked Salt of the Earth segment decreased 6.43 percent over the past five years. Column six reports each segments overall share of Maryland license sales from 2001 to 2005. The amount by which each segments' market share has changed from 2001 to 2005 is reported in the last column (column seven). For example, the total market share held by Salt of the Earth increased by 0.55 percent. Compared to column five, this indicates Salt of the Earth is decreasing in terms of total licenses purchased, but since they are decreasing at a slightly slower rate than overall license sales, their market share is not suffering. Please note that column six is a key item as it shows us which segments are the most significant in terms of license sales and revenues.

Table 8. Resident License Buyers by Segment, as a Percentage of All Licenses Sold Annually

1) Rank	2) Tapestry Segment	3) LifeMode Groups	4) Urban Group	5) Net Change in Real Licenses Sold from 2001-2005	6) Percentage Market Share from 2001-2005	7) Percentage Change in Market Share from 2001-2005
1	Salt of the Earth	Factories and Farms	Rural I	-6.43%	13.07%	0.55%
2	Rustbelt Traditions	Traditional Living	Urban Outskirts I	-7.93%	10.28%	-1.06%
3	Green Acres	Upscale Avenues	Rural I	-4.95%	8.26%	2.14%
4	Rustbelt Retirees	Senior Styles	Suburban Periphery II	-7.96%	6.03%	-1.09%
5	Cozy and Comfortable	Upscale Avenues	Suburban Periphery II	-5.14%	5.91%	1.93%
6	Southern Satellites	Factories and Farms	Rural II	-8.41%	5.25%	-1.58%
7	Home Town	Factories and Farms	Suburban Periphery II	-11.46%	5.01%	-4.85%
8	Prosperous Empty Nesters	Senior Styles	Suburban Periphery I	-4.65%	2.87%	2.46%
9	Midlife Junction	Traditional Living	Suburban Periphery II	-6.81%	2.80%	0.15%
10	Great Expectations	High Hopes	Urban Outskirts I	-10.92%	2.80%	-4.27%
11	Heartland Communities	Senior Styles	Small Towns	-9.42%	2.74%	-2.67%
12	Main Street, USA	Traditional Living	Urban Outskirts I	-5.80%	2.67%	1.23%
13	Exurbanites	High Society	Suburban Periphery I	-3.71%	2.52%	3.48%
14	Midland Crowd	American Quilt	Rural I	-7.72%	2.43%	-0.84%
15	Sophisticated Squires	High Society	Suburban Periphery I	-0.91%	2.31%	6.48%
16	Rooted Rural	American Quilt	Rural II	-10.44%	2.21%	-3.76%
17	In Style	Upscale Avenues	Suburban Periphery I	-3.27%	1.79%	3.95%
18	Simple Living	Senior Styles	Urban Outskirts II	-8.73%	1.54%	-1.92%
19	City Dimensions	Global Roots	Metro Cities II	-15.02%	1.42%	-8.69%
20	Up and Coming Families	Family Portrait	Suburban Periphery I	-4.17%	1.35%	2.98%
21	Aspiring Young Families	High Hopes	Metro Cities II	-5.29%	1.34%	1.78%
22	Boomburbs	High Society	Urban Outskirts I	2.48%	1.26%	10.13%
23	Metro City Edge	Metropolis	Urban Outskirts II	-10.55%	1.18%	-3.88%
24	Modest Income Homes	Metropolis	Urban Outskirts II	-11.49%	1.06%	-4.89%
25	Old and Newcomers	Solo Acts	Metro Cities II	-8.28%	0.94%	-1.44%
26	Suburban Splendor	High Society	Suburban Periphery I	3.25%	0.93%	10.95%
27	Crossroads	American Quilt	Small Towns	-9.96%	0.92%	-3.24%
28	Enterprising Professionals	Upscale Avenues	Metro Cities I	-0.87%	0.90%	6.53%
29	Milk and Cookies	Family Portrait	Metro Cities I	-8.26%	0.84%	-1.41%
30	Retirement Communities	Senior Styles	Metro Cities II	-10.18%	0.83%	-3.48%
31	Family Foundations	Traditional Living	Metro Cities II	-9.62%	0.76%	-2.88%
32	Rural Bypasses	Factories and Farms	Rural II	-10.58%	0.71%	-3.91%
33	Rural Resort Dwellers	American Quilt	Rural I	-4.22%	0.71%	2.93%
34	Metropolitans	Metropolis	Metro Cities I	-3.73%	0.54%	3.45%
35	Young and Restless	Solo Acts	Metro Cities II	-8.15%	0.42%	-1.30%
36	Inner City Tenants	Global Roots	Metro Cities II	-11.67%	0.40%	-5.08%
37	Social Security Set	Senior Styles	Principal Urban Centers II	-13.99%	0.39%	-7.57%
38	Connoisseurs	High Society	Metro Cities I	1.34%	0.37%	8.90%
39	City Commons	Family Portrait	Principal Urban Centers II	-10.88%	0.34%	-4.24%

10

1) Rank	2) Tapestry Segment	3) LifeMode Groups	4) Urban Group	5) Net Change in Real Licenses Sold from 2001-2005	6) Percentage Market Share from 2001-2005	7) Percentage Change in Market Share from 2001-2005
40	College Towns	Scholars & Patriots	Urban Outskirts II	-4.98%	0.30%	2.11%
41	Senior Sun Seekers	Senior Styles	Small Towns	-12.27%	0.24%	-5.72%
42	Las Casas	Global Roots	Principal Urban Centers II	15.15%	0.23%	23.74%
43	Wealthy Seaboard Suburbs	High Society	Metro Cities I	2.30%	0.19%	9.93%
44	Urban Chic	Upscale Avenues	Metro Cities I	-1.13%	0.15%	6.24%
45	Metro Renters	Solo Acts	Principal Urban Centers I	-8.02%	0.15%	-1.16%
46	Dorms to Diplomas	Scholars & Patriots	Metro Cities II	-3.37%	0.13%	3.84%
47	Prairie Living	Factories and Farms	Rural II	0.86%	0.09%	8.39%
48	Pleasant-ville	Upscale Avenues	Metro Cities I	0.30%	0.08%	7.78%
49	Industrious Urban Fringe	Global Roots	Urban Outskirts I	-14.48%	0.08%	-8.10%
50	Silver and Gold	Senior Styles	Suburban Periphery I	-5.50%	0.07%	1.55%
51	Top Rung	High Society	Metro Cities I	7.57%	0.05%	15.59%
52	Laptops and Lattes	Solo Acts	Principal Urban Centers I	-6.30%	0.04%	0.69%
53	Urban Villages	Family Portrait	Principal Urban Centers I	6.03%	0.03%	13.94%
54	City Strivers	Metropolis	Principal Urban Centers II	-2.35%	0.02%	4.93%
55	Urban Rows	Metropolis	Principal Urban Centers II	-24.31%	0.02%	-18.66%
56	The Elders	Senior Styles	Suburban Periphery II	-12.88%	0.02%	-6.38%
57	Military Proximity	Scholars & Patriots	Suburban Periphery II	32.86%	0.01%	42.77%
58	Trendsetters	Solo Acts	Principal Urban Centers I	-1.85%	0.01%	5.47%
59	City Lights	Metropolis	Principal Urban Centers I	-17.65%	0.00%	-11.50%
60	NeWest Residents	Global Roots	Principal Urban Centers II	-14.29%	0.00%	-7.89%
61	High Rise Renters	Global Roots	Principal Urban Centers II	#DIV/0!	0.00%	#DIV/0!
62	International Marketplace	Global Roots	Principal Urban Centers I	-100.00%	0.00%	-100.00%

* Each urbanization group is divided into two categories, I and II. "I" categories are typically more affluent, with higher incomes, than "II" categories.

The top seven segments make up over 50 percent of the buyers. Just the top two (of 62) represent nearly a quarter of all sales. "Factories and Farms" LifeMode appears three times in the top seven segments, and represents nearly twice as many license customers as the next largest shareholder, "Upscale Avenues." The number of licensed customers has decreased for all of the top ranked segments. The first increase is seen at position #22, "Boomburbs". This indicates license sales to all major segments of Ohio's population are decreasing. Anglers are finding other things to do with their free time.

Although the segments show a decrease, some segments may be decreasing at a lesser rate. In Table 8 above, we added TAPESTRY® Urban Groups. These describe the level of urbanization where the segments, or license customers' neighborhoods, are found. In Table 9, we consolidated the resident data to get a better idea of the rural versus urban differences.

Table 9. License Sales Market Share by Urbanization Group, Residents only

Category	Market Share	% Change in Market Share
Rural	32.73%	0.06%
Suburban Periphery	31.62%	0.32%
Urban Outskirts	21.16%	-0.20%
Metro Cities	9.37%	-0.05%
Small Towns	3.90%	-0.12%
Principal Urban Centers	1.22%	0.00%

Table 9 shows the importance of rural and suburban residents to Ohio's fishing license revenue base. As seen in Table 8, the actual, or real, number of licenses sold is decreasing, but the percentage of market share is has increased slightly for the rural and suburban groups. This means customers from these segments are dropping out at a slower rate. Note that these two categories make up over 64 percent of Ohio's license customer base. The remaining urban groups show slight decreases in market share.

Please note the data in this report is based on the purchaser's home residence, not where he or she purchased their license. If a trend exists in Ohio for urban residents to buy their licenses close to their fishing site, that trend cannot be identified in this report.

Let us now take a look at those segments with the fastest growing market share. These groups have increased their share of annual license sales from 2001 to 2005. Table 10 presents the top 15 segments ranked by who is buying a greater portion of Ohio's licenses.

Table 10. Top 15 Segments Ranked by Fastest Growth in Market Share, 2001-2005

1) Rank	2) Tapestry Segment	3) LifeMode Groups	4) Urban Group	5) Net Change in Real Licenses Sold from 2001-2005	6) Percentage Market Share from 2001-2005	7) Percentage Change in Market Share from 2001-2005
57	Military Proximity	Scholars & Patriots	Suburban Periphery II	32.86%	0.01%	42.77%
42	Las Casas	Global Roots	Principal Urban Centers II	15.15%	0.23%	23.74%
51	Top Rung	High Society	Metro Cities I	7.57%	0.05%	15.59%
53	Urban Villages	Family Portrait	Principal Urban Centers I	6.03%	0.03%	13.94%
26	Suburban Splendor	High Society	Suburban Periphery I	3.25%	0.93%	10.95%
22	Boomburbs	High Society	Urban Outskirts I	2.48%	1.26%	10.13%
43	Wealthy Seaboard Suburbs	High Society	Metro Cities I	2.30%	0.19%	9.93%
38	Connoisseurs	High Society	Metro Cities I	1.34%	0.37%	8.90%
47	Prairie Living	Factories and Farms	Rural II	0.86%	0.09%	8.39%
48	Pleasant-ville	Upscale Avenues	Metro Cities I	0.30%	0.08%	7.78%
28	Enterprising Professionals	Upscale Avenues	Metro Cities I	-0.87%	0.90%	6.53%

15	Sophisticated Squires	High Society	Suburban Periphery I	-0.91%	2.31%	6.48%
44	Urban Chic	Upscale Avenues	Metro Cities I	-1.13%	0.15%	6.24%
58	Trendsetters	Solo Acts	Principal Urban Centers I	-1.85%	0.01%	5.47%
54	City Strivers	Metropolis	Principal Urban Centers II	-2.35%	0.02%	4.93%

Unlike other states analyzed to date, all of Ohio's significant segments bought fewer licenses from 2001 and 2005. The segments showing the lowest loss levels are small contributors of license buyers. We encourage these groups be overlooked as it is not known if the change is related to real trends or not, and their overall impact is negligible. The segments to review are those with the top ranking such as "Sophisticated Squires" and "Boomburbs." These segments have over 1% of the market and have a greater impact on annual license revenues compared to the other sectors in Table 10. The "Boomburbs" segment may merit further investigation using qualitative research to see why its members are buying more licenses while most other segments are buying less.

It may be worth knowing which segments are shrinking the fastest. Table 11 presents the segments suffering the worst declines.

Table 11. Top 15 Segments Ranked By Shrinking Market Share

1) Rank	2) Tapestry Segment	3) LifeMode Groups	4) Urban Group	5) Net Change in Real Licenses Sold from 2001-2005	6) Percentage Market Share from 2001-2005	7) Percentage Change in Market Share from 2001-2005
62	International Marketplace	Global Roots	Principal Urban Centers I	-100.00%	0.00%	-100.00%
55	Urban Rows	Metropolis	Principal Urban Centers II	-24.31%	0.02%	-18.66%
59	City Lights	Metropolis	Principal Urban Centers I	-17.65%	0.00%	-11.50%
19	City Dimensions	Global Roots	Metro Cities II	-15.02%	1.42%	-8.69%
49	Industrious Urban Fringe	Global Roots	Urban Outskirts I	-14.48%	0.08%	-8.10%
60	NeWest Residents	Global Roots	Principal Urban Centers II	-14.29%	0.00%	-7.89%
37	Social Security Set	Senior Styles	Principal Urban Centers II	-13.99%	0.39%	-7.57%
56	The Elders	Senior Styles	Suburban Periphery II	-12.88%	0.02%	-6.38%
41	Senior Sun Seekers	Senior Styles	Small Towns	-12.27%	0.24%	-5.72%
36	Inner City Tenants	Global Roots	Metro Cities II	-11.67%	0.40%	-5.08%
24	Modest Income Homes	Metropolis	Urban Outskirts II	-11.49%	1.06%	-4.89%
7	Home Town	Factories and Farms	Suburban Periphery II	-11.46%	5.01%	-4.85%
10	Great Expectations	High Hopes	Urban Outskirts I	-10.92%	2.80%	-4.27%
39	City Commons	Family Portrait	Principal Urban Centers II	-10.88%	0.34%	-4.24%
32	Rural Bypasses	Factories and Farms	Rural II	-10.58%	0.71%	-3.91%

This table demonstrates that the worst declines are primarily in the urban areas, but many of the most rapidly shrinking segments come from suburban areas. Recall in Table 9 that suburban areas overall showed stronger license sales compared to other areas except in rural communities. This indicates we cannot paint too broad a picture when claiming sales are up or down within urbanization groups. In general, however, when comparing Table 8 to Table 9, we can fairly say that sales are declining faster within urbanized areas.

Next we will look at the loyalty of these anglers.

Purchasing Frequencies: Gender Differences

During the review of the five year sales trends, a question was raised if the frequency of fishing license purchases over five years differed between men and women. This analysis was run for resident license holders only and the results are presented below:

# of Years Bought a License Over the Last First Years	Male	Female	Unknown
1	58.1%	25.2%	16.8%
2	62.2%	20.2%	17.5%
3	75.4%	19.8%	4.8%
4	79.7%	15.9%	4.4%
5	84.7%	10.8%	4.5%

Men are much more likely to buy a license in multiple years than women, indicating men are more likely to fish regularly. Multiple reasons could be offered as to why, but the main purpose of this paper is to explore *what* is happening versus *why*. Any promotions encouraging anglers to purchase licenses more frequently, or any new initiatives such as a four-year license, would likely be more effective if targeted towards males.

Section 4: The "Churn" Issue

Let's look at the "churn" issue. The "churn" issue refers to the rate of anglers entering and dropping out of the customer base. Considering all Ohio residents who purchased a license at least once over the past five years, Table 13 reports the percentage who bought a license in just one, two, up to all five of the most recent years.

Table 12. License Purchasing Frequency

License Purchasing Frequency	Percentage of Customers, 2001 to 2005
1 of 5 years:	40.8%
2 of 5 years:	20.2%
3 of 5 years:	13.3%
4 of 5 years:	10.7%
5 of 5 years:	15.0%

It could be argued that over 61 percent of license customers are not loyal customers and bought only one or two years of the past five years and find other activities to spend their free time on each year. Only 25 percent of Ohio's anglers bought a license in four or five of the past five years. Time constraints or competing recreations may be diverting their attention. Encouraging existing anglers to fish more often or adding convenience and simplicity to the license buying and renewal process could result in increased license revenues. The next steps are to find out which type of angler is more or less likely to purchase a license frequently or infrequently.

Tables 13 and 14 present purchasing frequencies for specific segments of resident customers.[2]

Table 13. Top 15 Segments Likely to Buy Frequently, Residents Only

Rank	Tapestry Segment	Bought 1 or 2 years only, out of 5 years	Bought 4 or 5 years, out of 5 years
33	Rural Resort Dwellers	46.66%	40.23%
50	Silver and Gold	50.42%	37.47%
53	Urban Villages	48.41%	35.98%
42	Las Casas	50.53%	33.97%
60	NeWest Residents	62.50%	33.33%
41	Senior Sun Seekers	55.68%	30.90%
47	Prairie Living	54.35%	30.58%
31	Family Foundations	59.04%	28.55%
16	Rooted Rural	57.63%	28.25%
1	Salt of the Earth	58.04%	27.97%

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[2] Non-residents are less likely to buy a Nebraska license annually. Their inclusion in this specific analysis could mislead the analysis.

Rank	Tapestry Segment	Bought 1 or 2 years only, out of 5 years	Bought 4 or 5 years, out of 5 years
3	Green Acres	58.44%	27.78%
4	Rustbelt Retirees	59.06%	27.68%
5	Cozy and Comfortable	59.59%	27.00%
11	Heartland Communities	59.30%	26.89%
6	Southern Satellites	58.54%	26.81%

We see five of the top 10 license buying segments (refer to Table 8), and all of the rural segments in the top 10, listed here. However, of the segments listed in Table 13 as those with the highest percentages of buyers purchasing a license in four or five of the past five years, every single one of them has even larger percentages (often twice as much) buying licenses in only one or two of the past five years. Across all segments of Ohio's population, people are more likely to buy licenses infrequently and are finding other ways of recreating in the interim years.

Please note that some of the segments in Table 13 have a very small share of the license market. Be careful drawing inferences about these segments as a change of just one or two licenses in these segments can significantly affect their rankings. This is true for most segments ranked in the thirties and higher.

Table 14 reviews those segments least loyal that only buy one or two licenses over the course of the five years.

Table 14. Top Segments Likely to Buy Licenses
Only 1 or 2 of the Past 5 Years, Residents Only

Rank	Tapestry Segment	Bought 1 or 2 years only, out of 5 years	Bought 4 or 5 years, out of 5 years
61	High Rise Renters	100.00%	0.00%
57	Military Proximity	88.70%	4.60%
58	Trendsetters	83.44%	9.27%
46	Dorms to Diplomas	77.82%	12.18%
45	Metro Renters	75.98%	14.25%
35	Young and Restless	72.21%	16.17%
52	Laptops and Lattes	71.93%	16.59%
36	Inner City Tenants	71.14%	17.12%
40	College Towns	70.30%	17.55%
28	Enterprising Professionals	70.11%	18.20%
51	Top Rung	68.18%	20.60%
54	City Strivers	67.72%	22.31%
38	Connoisseurs	67.35%	20.90%
34	Metropolitans	67.31%	20.70%
44	Urban Chic	67.28%	20.62%

In Table 14 the rankings indicate that less loyal segments befall from urban centers that are primarily insignificant in terms of license sales and do not offer much revenue. Comparing Table 13 and Table 14, in general the rural and suburban segments are more loyal than the urban ones, with some exceptions. Drop-out anglers from the more high ranking loyal segments will have a much more severe impact on license revenues than drop-outs from lower ranked segments. Efforts to encourage anglers from these neighborhoods to renew their license each year may have more success in maintaining revenues versus trying the same with anglers from segments with smaller market shares. Overall, the frequency rate for purchasing Ohio licenses does not vary significantly across most segments. Differences are slight, suggesting the reasons why people are not buying licenses every year may be similar across Ohio's communities and neighborhoods.

Propensity to Buy a License

Focusing on segments with a greater "propensity" to purchase a license may yield greater returns. "Propensity" is a person's likelihood to purchase a license compared to the likelihood of the average angler buying a license. Table 15 uses a ratio to determine each segment's propensity. This ratio is the segment's "market share of all licenses sold" divided by the "percentage of the Ohio population" held by that segment, and is known as the "Sales to Population" ratio or their propensity. All segments with a "Sales/Pop Ratio" greater than one are more likely to buy a license compared to the average Ohio resident. Efforts to recruit new anglers or to encourage greater purchasing frequencies would likely have higher success if they targeted the segments with ratios greater than one.

Table 15. Segments with a Greater Propensity to Buy Licenses, Residents Only

Rank	Tapestry Segment	LifeMode Group	% of 2005 License Sales	% of State Population	Sales/Pop Ratio
42	Las Casas	Global Roots	0.25%	0.19%	1.32
1	Salt of the Earth	Factories and Farms	13.09%	12.09%	1.08
33	Rural Resort Dwellers	American Quilt	0.71%	0.66%	1.08
31	Family Foundations	Traditional Living	0.75%	0.70%	1.07
2	Rustbelt Traditions	Traditional Living	10.20%	9.64%	1.06
8	Prosperous Empty Nesters	Senior Styles	2.91%	2.75%	1.06
3	Green Acres	Upscale Avenues	8.36%	7.92%	1.06
5	Cozy and Comfortable	Upscale Avenues	5.97%	5.70%	1.05
6	Southern Satellites	Factories and Farms	5.18%	4.98%	1.04
4	Rustbelt Retirees	Senior Styles	6.01%	5.80%	1.04
7	Home Town	Factories and Farms	4.84%	4.72%	1.03
24	Modest Income Homes	Metropolis	1.03%	1.01%	1.02
13	Exurbanites	High Society	2.59%	2.55%	1.02
12	Main Street, USA	Traditional Living	2.69%	2.66%	1.01
23	Metro City Edge	Metropolis	1.15%	1.14%	1.01
9	Midlife Junction	Traditional Living	2.81%	2.87%	0.98

Rank	Tapestry Segment	LifeMode Group	% of 2005 License Sales	% of State Population	Sales/Pop Ratio
18	Simple Living	Senior Styles	1.52%	1.56%	0.98
10	Great Expectations	High Hopes	2.74%	2.82%	0.97
16	Rooted Rural	American Quilt	2.17%	2.24%	0.97
17	In Style	Upscale Avenues	1.83%	1.92%	0.95
39	City Commons	Family Portrait	0.33%	0.35%	0.94
37	Social Security Set	Senior Styles	0.37%	0.40%	0.94
15	Sophisticated Squires	High Society	2.38%	2.52%	0.94
14	Midland Crowd	American Quilt	2.42%	2.58%	0.94
30	Retirement Communities	Senior Styles	0.82%	0.87%	0.94
11	Heartland Communities	Senior Styles	2.70%	2.89%	0.93
26	Suburban Splendor	High Society	0.99%	1.06%	0.93
19	City Dimensions	Global Roots	1.34%	1.44%	0.93
34	Metropolitans	Metropolis	0.56%	0.61%	0.92
21	Aspiring Young Families	High Hopes	1.34%	1.46%	0.92
29	Milk and Cookies	Family Portrait	0.84%	0.92%	0.91
22	Boomburbs	High Society	1.35%	1.49%	0.91
38	Connoisseurs	High Society	0.38%	0.43%	0.90
28	Enterprising Professionals	Upscale Avenues	0.94%	1.05%	0.90
25	Old and Newcomers	Solo Acts	0.95%	1.05%	0.90
27	Crossroads	American Quilt	0.91%	1.03%	0.88
43	Wealthy Seaboard Suburbs	High Society	0.20%	0.23%	0.87
40	College Towns	Scholars & Patriots	0.30%	0.35%	0.86
54	City Strivers	Metropolis	0.02%	0.03%	0.85
32	Rural Bypasses	Factories and Farms	0.70%	0.82%	0.85
20	Up and Coming Families	Family Portrait	1.37%	1.62%	0.85
53	Urban Villages	Family Portrait	0.03%	0.03%	0.83
36	Inner City Tenants	Global Roots	0.39%	0.48%	0.81
44	Urban Chic	Upscale Avenues	0.16%	0.20%	0.81
51	Top Rung	High Society	0.06%	0.07%	0.80
35	Young and Restless	Solo Acts	0.42%	0.54%	0.78
46	Dorms to Diplomas	Scholars & Patriots	0.13%	0.17%	0.76
55	Urban Rows	Metropolis	0.01%	0.02%	0.75
47	Prairie Living	Factories and Farms	0.09%	0.13%	0.70
45	Metro Renters	Solo Acts	0.15%	0.22%	0.70
52	Laptops and Lattes	Solo Acts	0.04%	0.06%	0.69
48	Pleasant-ville	Upscale Avenues	0.09%	0.13%	0.66
49	Industrious Urban Fringe	Global Roots	0.07%	0.11%	0.66
41	Senior Sun Seekers	Senior Styles	0.23%	0.37%	0.62
50	Silver and Gold	Senior Styles	0.07%	0.15%	0.44
57	Military Proximity	Scholars & Patriots	0.01%	0.04%	0.31
58	Trendsetters	Solo Acts	0.01%	0.03%	0.26
56	The Elders	Senior Styles	0.02%	0.09%	0.17
60	NeWest Residents	Global Roots	0.00%	0.01%	0.14
59	City Lights	Metropolis	0.00%	0.01%	0.12
61	High Rise Renters	Global Roots	0.00%	0.00%	-

Only 15 of 62 possible segments have a propensity ratio greater than one. This is low compared to many other states, such as Michigan. Also, most of these segments have low propensity ratios. Only one has a ratio greater than 1.1 (Las Casas with 1.32), but this segment is a very minor source of license sales. In general, new efforts to recruit anglers or generate additional license revenues should have greater success if targeted at segments with a capacity ratio greater than one. However, there may not be a significant difference within Ohio given the low propensity ratios. It should be noted that the segments with a propensity ratio greater than one tend to be rural. A majority of the lowest ranked segments are generally affluent and located in metro/urban areas.

Section 5: "Upgraders" and "Downgraders"

Current customers moving to higher- or lower-priced license options also drive revenue trends. Table 16 looks at residents who specifically bought a license in 2001 or in 2005[3]. Those who bought a license in the intervening years were excluded for this particular analysis. The table reports the percentage who a) downgraded to a lower priced license, b) dropped out, c) are new customers, d) are steady customers and bought the same license each time, or e) upgraded to a higher-priced license.

Table 16. Upgrading/Downgrading Trends

Resident Purchasing Behavior, 2001 vs 2005	Percentage of Customers Who Bought a License in Both 2001 and 2005
Dropped	39.00%
New	32.43%
Steady	26.63%
Upgraded	1.51%
Downgraded	0.44%

Thirty-nine percent of the customers did not buy a license in 2005 after buying one in 2001. This "churn" issue is of concern in Ohio. Many of these may be people who went fishing "on a whim" at the request of another and do not plan to fish regularly, but could be enticed to go again. Encouraging anglers to renew their licenses could provide a big impact on license sales. While the numbers of customers who upgraded or downgraded their licenses are low, over three times more upgraded their purchase (went from a 1-day to an annual license) rather than downgrade.

Using the TAPESTRY® data, we can gain a better understanding of who is more likely to upgrade or downgrade. Table 17 ranks the segments based on the segment providing the biggest boost to agency revenues. This is measured using the metric in the last column. This metric, which multiplies each segment's market share by it's percentage of customers who upgraded their purchases, reports how much Ohio's license revenues increased as a result of each segment's upgraded purchases. Table 17 is based on purchases made in 2001 and also in 2005 exclusive of what was purchased in-between.

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[3] If a resident bought more than one license in a year, the license that cost the most was used.

Table 17. Top 15 Segments Ranked by Those with Highest Upgrading Volume, Residents

Rank	Segment	LifeMode Groups	Urban Groups	% Downgraded	% Upgraded	% Market Share, '01-'05	% Upgraded X Market Share Ratio
1	Salt of the Earth	Factories and Farms	Rural I	0.28%	1.69%	13.28%	0.22%
2	Rustbelt Traditions	Traditional Living	Urban Outskirts I	0.27%	1.43%	10.29%	0.15%
3	Green Acres	Upscale Avenues	Rural I	0.32%	1.69%	8.38%	0.14%
4	Rustbelt Retirees	Senior Styles	Suburban Periphery II	0.35%	1.99%	6.11%	0.12%
5	Cozy and Comfortable	Upscale Avenues	Suburban Periphery II	0.37%	1.90%	5.96%	0.11%
6	Southern Satellites	Factories and Farms	Rural II	0.24%	1.50%	5.31%	0.08%
7	Home Town	Factories and Farms	Suburban Periphery II	0.30%	1.48%	4.97%	0.07%
8	Prosperous Empty Nesters	Senior Styles	Suburban Periphery I	0.46%	2.13%	2.89%	0.06%
11	Heartland Communities	Senior Styles	Small Towns	0.24%	1.81%	2.77%	0.05%
9	Midlife Junction	Traditional Living	Suburban Periphery II	0.32%	1.79%	2.79%	0.05%
13	Exurbanites	High Society	Suburban Periphery I	0.36%	1.93%	2.53%	0.05%
16	Rooted Rural	American Quilt	Rural II	0.33%	2.03%	2.25%	0.05%
12	Main Street, USA	Traditional Living	Urban Outskirts I	0.29%	1.67%	2.65%	0.04%
10	Great Expectations	High Hopes	Urban Outskirts I	0.28%	1.29%	2.74%	0.04%
14	Midland Crowd	American Quilt	Rural I	0.27%	1.43%	2.44%	0.03%

The segments providing the biggest impact on state license revenues from moving up to annual licenses from 1-day licenses tend to be from rural and suburban areas.

Not many license options are provided to Ohio license buyers (Table 1). This would be similar to a company providing only one or two sizes or models of its product. This limited selection may be suppressing the revenues Ohio could be earning from license sales. Ohio could consider introducing a higher-priced license offering additional benefits such as the opportunity to fish restricted fisheries, trout fishing, etc. The higher price must be set at a point where the extra cost is less than the perceived benefit of the additional privileges. Then, when reminders to renew annual licenses are sent[4], people in the top segments listed in Table 17 who have yet to upgrade should be encouraged to do so and be reminded of the additional value available from higher-priced licenses. To reduce the downgrading rate, people who already hold a higher-priced license should be reminded of the additional benefits they receive. While such efforts will not result in substantial increases in revenues, the marginal increases should be well worth the costs and efforts.[5] The Ohio DOW will want to anticipate costs and requirements before initiating such efforts to ensure this is true.

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[4] Ohio does this, correct? Remember Table 12 and the low rate of renewals. Reminders should always be sent, just like magazine companies do when you subscription is about to expire.
[5] The upgrades represented in Table 17 boosted revenues only by 1.26%.

Conclusion

In 2005, 87.8 percent of Ohio's fishing licenses were purchased by residents. Approximately 75 percent of the purchasers were male, indicating females were more likely to favor other forms of recreation. Resident license buyers were more likely to be in the 40-49 year old age bracket. Over the past five years, Ohio's total number of buyers and licenses sold decreased (Tables 1-5). The overall decline is mirrored in many other states, and may reflect a shift away from fishing and towards others forms of recreation. Other reasons could exist, such as angler's perceptions of fishing conditions, access, and more. Qualitative research may provide more insights regarding why many anglers have discontinued buying licenses.

Ohio's license records were appended with information explaining the lifestyle characteristics of each license buyer. This data, licensed from ESRI's TAPESTRY® data service, is built from U.S. Census bureau data and other sources and describes the lifestyle typical to people living on every city block or immediate area in the U.S. Lifestyle data is matched with each fishing license record using the customer's street address. The lifestyle analysis process is based on the concept of "birds of a feather flock together" whereby people tend to live in proximity to others like themselves. Major corporate marketing efforts have relied on lifestyle analyses for years to identify potential sales growth areas and new business opportunities. The results of such analyses allow us to learn more about the lifestyles of people who purchase fishing licenses and more.

The Tapestry data first groups customers into a dozen major lifestyle categories known as "LifeMode" categories. The LifeMode categories show us that, in general, the population of Ohio fishing license buyers reflects the overall state population, with some differences. The top four LifeMode groups, ranked in terms of total license buyers each provides, comprise nearly three-quarters of 2004-2005 license customers (Table 6). They come from small towns, groups with modest to above average incomes, and retirees. The top three LifeMode groups are more likely to buy a license compared to the average state resident. Members of the top-ranked "Factories and Farms" group are not only more likely to buy a license than the average resident, but by far buy more licenses than any other group and possesses almost one quarter of the total license market. On the other hand, younger and single people, such as the "Scholars & Patriots" and "Solo Acts", plus immigrant communities, are least likely to buy a license compared to the average resident and make up a very small share of the license market.

The 12 major LifeMode groups are further divided in 65 segments known as "Tapestry®" segments. Using the more detailed Tapestry® segmentation data for residents and non-residents (Table 7), we see that the top communities for license sales are rural or from older neighborhoods, families, typically blue collar with average to below-average income (only 22% of the top segments highlighted in Table 7 show above-average incomes). Communities dominated by young-educated-urban or ethically diverse types do not appear as top sources of Ohio resident license sales. This does not mean these people will not fish in the future, but at this stage in their lives, fishing is not a common

activity. The top seven (of 62) segments provide up over 50 percent of Ohio's resident license buyers. Just the top two (of 62) represent nearly a quarter of all sales. Rural and blue-collar neighborhoods represent nearly twice as many license customers as the more affluent neighborhoods. However, the number of licensed customers has decreased for all of the top ranked segments. The first increase is seen at position #22, "Boomburbs". This indicates license sales to all major segments of Ohio's population are decreasing. Anglers are finding other things to do with their free time.

Table 9 shows the importance of rural and suburban residents to Ohio's fishing license revenue base. As seen in Table 8, the actual, or real, number of licenses sold is decreasing, but the percentage of market share is has increased slightly for the rural and suburban groups. This means customers from rural and suburban areas are dropping out at slower rates. Note that rural and suburban neighborhoods provide over 64 percent of Ohio's license customer base. The remaining urban groups (metro cities, principal urban centers, etc.) show slight decreases in market share.

Unlike other states analyzed to date, all of Ohio's significant segments bought fewer licenses from 2001 and 2005. The segments showing the lowest loss levels are often very small contributors of license buyers (.01% to .09%; Table 10). We encourage these groups be overlooked as it is not known if the change is related to real trends or not, and their overall impact is negligible. The segments to examine closely regarding stronger sales performance over time are those segments with the highest rankings in Table 10. Such segments include "Sophisticated Squires" and "Boomburbs." These segments have over 1% of the market and have a greater impact on annual license revenues compared to the other sectors in Table 10. The "Boomburbs" segment may merit further investigation using qualitative research to see why its members are buying more licenses while most other segments are buying less.

This table demonstrates that the worst declines are primarily in the urban areas, but many of the most rapidly shrinking segments come from suburban areas. While rural and suburban areas overall showed stronger license sales compared to more urbanized parts of Ohio, there are Tapestry segments within each that perform well below or above average. When applying marketing efforts, be sure to identify and target specific Tapestry segments to maximize returns. Do not rely on the more broad categories such as "rural", "Metro Cities" or the LifeMode categories. These broad categories are intended to help us better understand license sales trends only.

Table 12 presented what is likely the most significant finding of this analysis. This table is worth repeating here:

License Purchasing Frequency (out of the past five years, the number of years people bought licenses)

License Purchasing Frequency	Percentage of Customers, 2001 to 2005
1 of 5 years:	40.8%
2 of 5 years:	20.2%
3 of 5 years:	13.3%
4 of 5 years:	10.7%
5 of 5 years:	15.0%

It could be argued that over 61 percent of license customers are not loyal customers and bought only one or two years of the past five years and find other activities to spend their free time on each year. Only 25 percent of Ohio's anglers bought a license in four or five of the past five years. Time constraints or competing recreations are diverting angler's attention towards other activities. Encouraging existing anglers to fish more often or adding convenience and simplicity to the license buying and renewal process could result in increased license revenues. In addition, providing fishing opportunities that overcome the negatives associated with fishing (accessibility, convenience, etc.) may also help. Surveying ex-license buyers to find out what they are doing now instead of fishing, and why these activities are preferred over fishing, may help identify new fishing products and opportunities that increase participation and frequency.

Of the segments contributing the most customers who bought a license in four or five of the past five years, every single one of them provides even greater numbers of anglers who bought licenses only once or twice in the past five years. Across all segments of Ohio's population, people are more likely to buy licenses infrequently and are finding other ways of recreating in the interim years.

In Table 14, the rankings indicate that less loyal segments (those who only bought once or twice in past years) come from urban centers. These areas are insignificant in terms of license sales. Comparing Table 13 and Table 14, in general the rural and suburban Tapestry segments are more loyal than the urban ones, with some exceptions. Drop-out anglers from the more high ranking loyal segments will have a much more severe impact on license revenues than drop-outs from lower ranked segments. Efforts to encourage anglers from these neighborhoods to renew their license each year may have more success in maintaining revenues versus trying the same with anglers from segments with smaller market shares.

Overall, the frequency rate for purchasing Ohio licenses does not vary significantly across most segments. Differences are slight, suggesting the reasons why people are not buying licenses every year may be similar across Ohio's communities and neighborhoods.

Only 15 of 62 possible segments show a propensity greater than one (Table 15). This means people from these Tapestry segments are more likely than the average Ohio resident to buy a fishing license. In general, new efforts to recruit anglers or generate additional license revenues should have greater success if targeting people from segments showing greater tendencies to buy licenses compared to the average resident. However, this approach may not provide a significant boost to marketing efforts because most segments with a propensity ratio greater than one are barely greater than one.

Not many license options are provided to Ohio license buyers (Table 1). This would be similar to a company providing only one or two sizes or models of its product. This limited selection may be suppressing the revenues Ohio could be earning from license sales. Ohio could consider introducing a higher-priced license offering additional benefits such as the opportunity to fish restricted fisheries, trout fishing, etc. The higher price must be set at a point where the extra cost is less than the perceived benefit of the additional privileges. Then, when reminders to renew annual licenses are sent, people in segments showing a greater likelihood of upgrading licenses (Table 17) should be encouraged to upgrade their license and be reminded of the additional value available from higher-priced licenses. While such efforts will not result in substantial revenue increases, the marginal increases should be well worth the costs and efforts. The DOW would want to anticipate costs and requirements before initiating such efforts to ensure marginal increases are likely.

Efforts to increase license revenues could take one of several directions. Such efforts could include:
   A. Recruit new anglers,
   B. Retain existing anglers,
   C. Encourage anglers to buy licenses more frequently, or
   D. Encourage anglers to upgrade their license purchases.

Recognizing that essentially all segments are showing losses in terms of actual licenses sold, boosting license revenues by recruiting new anglers will be tough and may not show a significant return on investment. We are not advocating against angler recruitment programs as fisheries conservation in the long run will depend on the number of active and interested anglers. But, from a perspective of boosting short-term agency revenues, angler recruitment efforts may not be the answer.

Recognizing the low percentage of anglers who buy a license every year, efforts to encourage existing license holders to renew their licenses should show the most significant and immediate return-on-investment. Using the State's electronic license database, efforts to boost revenues can be made by directly contacting people from key segments who are up for renewal and encourage them to renew. The State's electronic licensing database can provide addresses for anglers who are prime for promotional contacts. Promotional mailings (snail mail or email) could target individuals with licenses that are about to expire encouraging them to renew. Control groups can be established by tracking purchasing behaviors of similar anglers who do not receive the mailer. Please note that license marketing efforts can show lower effectiveness

when a simple, directed mailing is the only step taken. Successful efforts include larger public promotions and messaging/advertising efforts combined with direct mailings and similar contacts. Therefore, direct mail/email promotions will likely work better if combined with a larger license marketing effort.

Another approach to possibly capture revenues from anglers who otherwise might only buy a license once or twice over a five year period is to sell a multiple year license. Many people may expect to fish more in the future than they actually do, and capturing their funds in advance may help boost overall revenues.

Closing Notes:

The purpose of this initial analysis is to identify the trends affecting license sales and revenues and help identify strategies that can boost license revenues. We will assist in developing additional analyses and provide interpretations per Ohio's requests and directions. Additional analyses could include:

1. Breakouts based on the type of license purchased,
2. Greater investigations of lapsed anglers (frequency of license purchases), and
3. Develop GIS maps that visualize where different types of anglers are located across the state.

Please note that this report is an initial, general overview of Ohio's license sales trends. We can run additional analysis requested by Ohio, assuming the necessary data are available. There are many more questions that could be asked, and discussions that should take place to ensure the data are adequately and properly interpreted.

Next step: Until the end of 2006, we will wait for Ohio's questions and requests for additional analysis, and will be available to answer questions about the contents of this report.