

WHERE IS DEMAND FOR SPORTFISHING THE GREATEST?

SOUTH DAKOTA'S REPORT



This Project was funded by a Multistate Conservation Grant (F25AP00181-00) from U.S. Fish and Wildlife Service and jointly administered with the Association of Fish and Wildlife Agencies.



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In a continuous cycle, some people take up fishing while others quit. Simultaneously, people move from place to place, transforming communities in the process. As these changes occur, demand for sportfishing access also shifts across communities. Insight from this research will provide state R3 programs and their partners a valuable tool to find potential new anglers, reactivate lapsed anglers, identify convenient access points, and initiate marketing campaigns that focus on those areas and type of anglers.

Identifying areas where **unmet fishing demand is currently greatest** and **access points are most needed**, while also **characterizing communities** where anglers live to provide geographically specific marketing strategies uses three key approaches:

- **Resident angler license purchase data:** Fishing license sales of any type from 2015 through 2024 were provided and explored in two ways. The first, through a 9-year and 4-year customer look-back period. The second, through an R3-based purchase/demographic profile, with additional details provided on the next slide. All customers who met the study's age requirement, holding any type of licenses, from one-day to annual, were considered.
- **Mapping and Tapestry™ lifestyle data:** To gain a spatial perspective about purchase profiles, the address data from a representative sample of the license records were mapped using ArcGIS tools available through ESRI and each address was assigned a Tapestry™ lifestyle segment. ESRI's Tapestry Segmentation identifies 67 distinctive markets in the US based on socioeconomic and demographic characteristics to provide an accurate, comprehensive profile of communities.
- **Waterbody locations and access:** To explore what angler access and fishing opportunities exist within the state, another layer of information was added to the maps: mapped waterbodies from the U.S. Geological Survey. By using this data in combination with the state's fish & wildlife agency's fishing information, it was possible to investigate how fishing opportunity might align with angler population density.

APPROACH: ANGLER LICENSE DATA & R3 CATEOGRY

The ten-year purchase history data enabled an exploration of the angling population within the state beyond a simple license holder distribution. Each license holder was categorized in a way that aligned with R3 efforts and placed into one of three categories based on their license purchase history during the last decade. Results specific to R3 categories are reflective of a random sample of 120,000 anglers, split evenly amongst the three categories.

Angler R3 Categories	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
New (Recruit)	No purchases								At least 1 purchase	
Steady (Retain)	At least 2 purchases					At least 1 purchase			At least 1 purchase	
Lapsed (Reactivate)	No purchases			No more than 2 purchases					No purchases	
	At least 5 purchases								No purchases	

Notes:

- Categories were designed to be mutually exclusive and conceptualized to develop actionable recommendations for state fish and wildlife agencies. As such, some anglers did not fall within a category, including many one-time license purchasers or anglers not requiring the purchase of a license due age restrictions (e.g., youth or seniors). Age restrictions were applied to ensure accurate classification: anglers in “New” category must be 21 or older to exclude first-time youth license buyers, while “Steady” and “Lapsed” anglers must be at least 25 years or older.
- The license data used for this study was collected from states, cleaned and processed so that the remaining data sample consisted of resident anglers who had purchased at least one fishing license during the 10-year timeframe. Missing data fields for personal identifying information resulted in a license holder being removed from the final sample.

Results are organized into three sections in this report:

- **Anglers by city:** License holder population distribution across the state
- **Anglers by R3 category:** Categorized license holder population distribution and characteristics by age, gender, urbanization, and Tapestry segment
- **Sioux Falls Case Study:** License holder population distribution in the focal area and R3 category by Tapestry segment

A companion workbook with detailed tables is also provided separately.

RESULTS: ANGLERS BY CITY

South Dakota has experienced geographical shifts in its angler population along the urban-rural continuum over the past decade, with an increasing share of licensed anglers residing in metropolitan core areas. Overall, about 2/3rds of anglers live in metropolitan core and commuting areas. Therefore, increasing access and awareness of fishing opportunities in urban areas could have an outsized effect on angler participation.

Urban-Rural Classification of Resident License Holder Address			
Urban-Rural	Percent of Angling Population (9-year average)	Angler Percent Change (2015 – 2023)	Angler Percent Change (2019 – 2023)
Metropolitan core	26.1%	2.9%	1.5%
Metropolitan commuting	12.5%	7.5%	4.7%
Micropolitan/Small cities/Suburbs	28.1%	-2.9%	-1.7%
Small Town	3.9%	1.5%	-2.7%
Rural	29.3%	-2.8%	-1.2%

**To designate a location as metropolitan, micropolitan, and small town/rural, the latest processed census data from 2020 was leveraged and aggregated from ten categories to five for reporting purposes, Rural-Urban Commuting Area Codes - Documentation | Economic Research Service.*

RESULTS: ANGLERS BY CITY

Reflected in the table are the top ten cities with the largest proportion of licensed anglers in 2023. The highest percentage of anglers in the state are found in Sioux Falls and Rapid City (column A). Naturally these cities also hold more of the state's population generally (column D).

Over the last nine years, the angler license holder population in these top ten cities contracted even when overall population showed growth (column B & E). From 2019 through 2023, angler populations remained down across all cities (column C),

City Name*	A Percent of all anglers in 2023	B Angler Percent Change (2015 - 2023)	C Angler Percent Change (2019 - 2023)	D Percent of Total Population (2023)	E Total Population Percent Change (2015-2023)**
Sioux Falls	16.0%	-22.6%	-14.0%	22.6%	21.4%
Rapid City	10.5%	-21.6%	-16.7%	10.8%	5.7%
Watertown	4.0%	-26.3%	-16.4%	2.9%	6.3%
Aberdeen	4.0%	-31.3%	-19.9%	3.5%	1.2%
Pierre	2.8%	-33.6%	-28.0%	1.9%	3.5%
Brookings	2.5%	-22.0%	-15.7%	2.9%	5.2%
Yankton	2.2%	-27.7%	-20.3%	2.2%	6.1%
Mitchell	2.2%	-30.6%	-16.5%	2.1%	3.4%
Huron	2.0%	-29.8%	-21.1%	1.8%	5.4%
Spearfish	2.0%	-21.3%	-18.6%	1.9%	15.9%

Note: To a certain extent the percent change in license holders reflects a variability in license records due to incomplete data for Personally Identifiable Information (PII) in earlier years. Additionally, percent changes may be exaggerated in cities with small angler populations, where even minor changes can produce large percentage shifts. Interpret results alongside each cities' overall share of anglers.

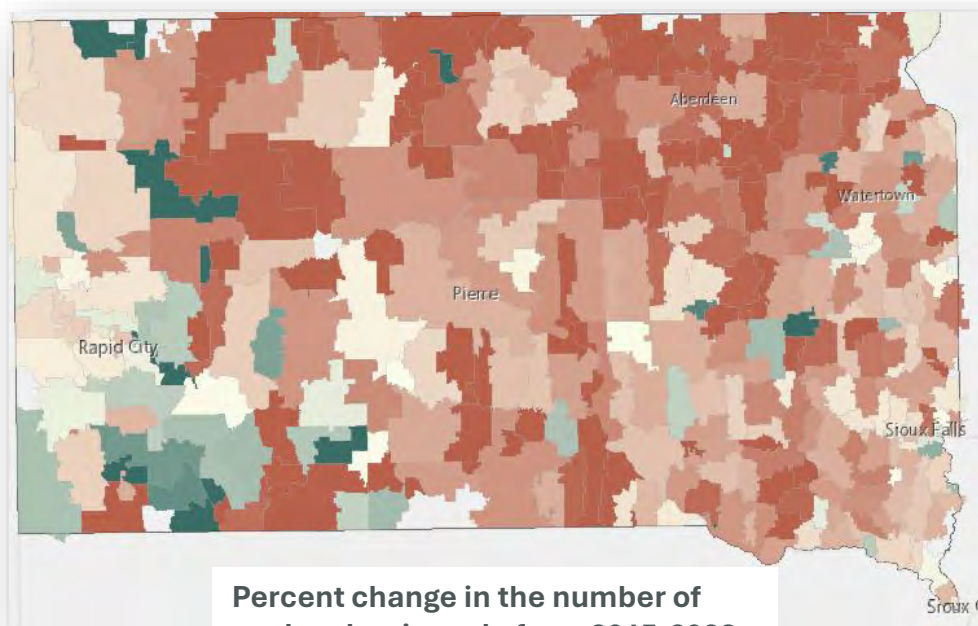
*Represents the top ten cities across the angling population in the state.

**Population data provided by the Census American Community Survey (ACS).

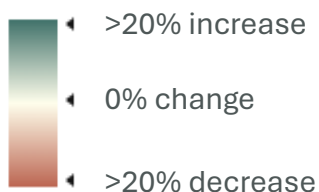
RESULTS: ANGLER CHANGE BY COUNTY

These two maps broaden the geographical scope. Over the last four years (map to the right), the areas with the greatest percent increase in anglers were large cities and larger populations (Rapid City, Sioux City, and Sioux Falls). In the last nine years, however, the decline in anglers was more widespread across the entire state (map to the left).

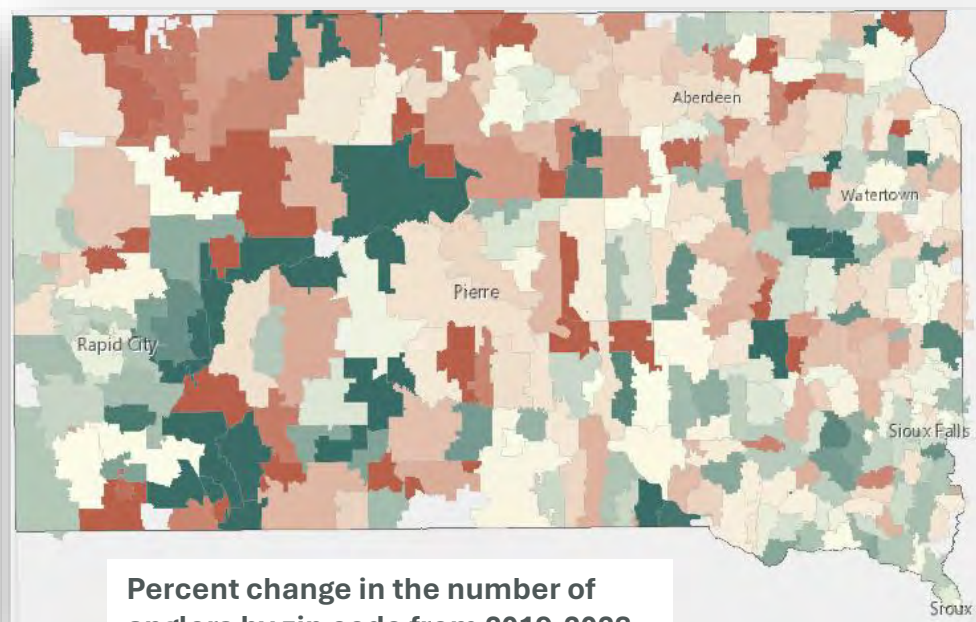
**Nine-year timeframe
(2015 through 2023)**



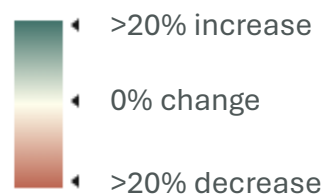
Percent change in the number of anglers by zip code from 2015-2023



**Four-year timeframe
(2019 through 2023)**



Percent change in the number of anglers by zip code from 2019-2023

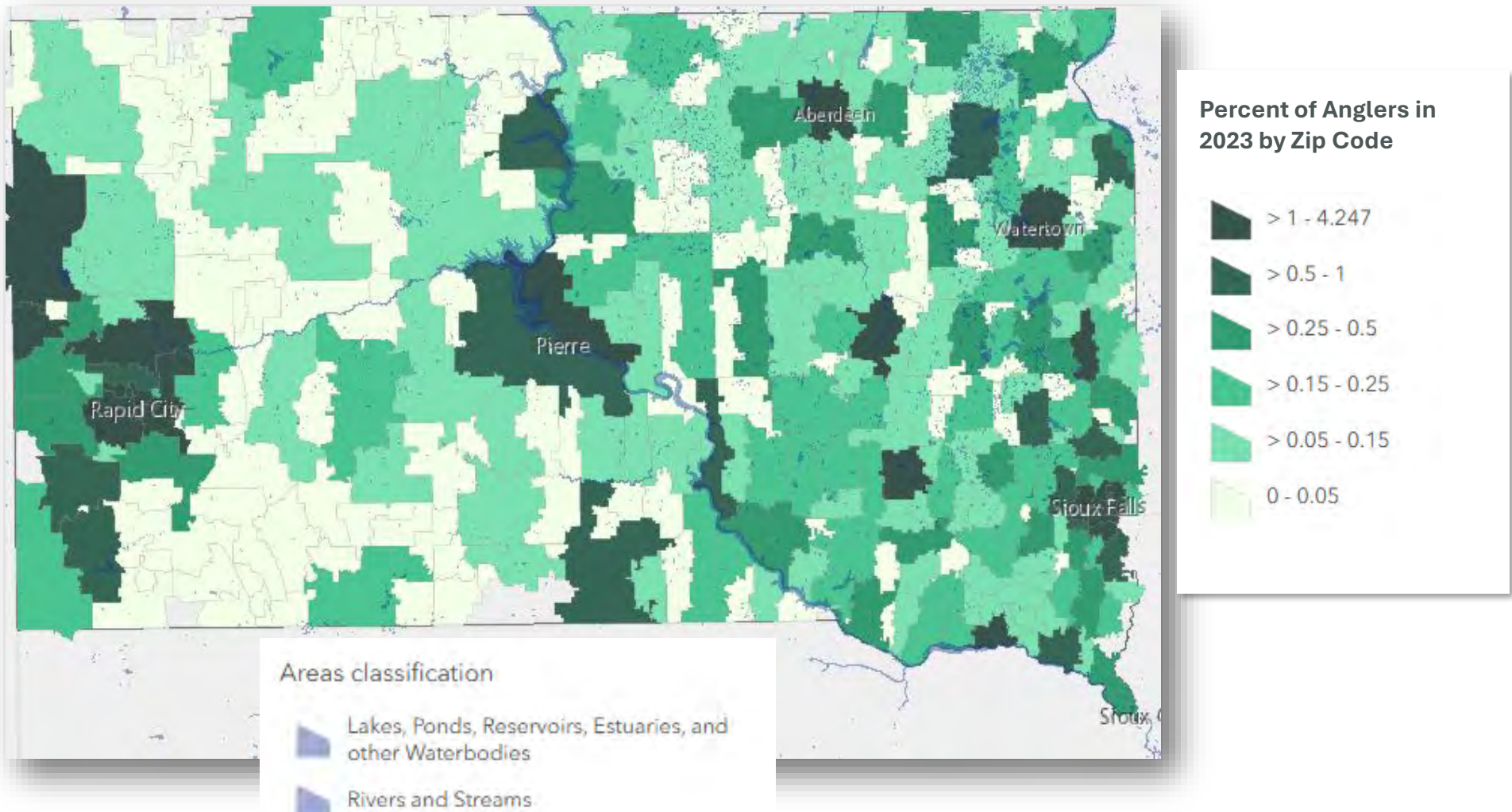


RESULTS: ANGLERS & FISHING OPPORTUNITY

Decision drivers to try or return to fishing may not be the presence of opportunity. They may instead be access, awareness, crowding, or the perceived ease of trying something new.

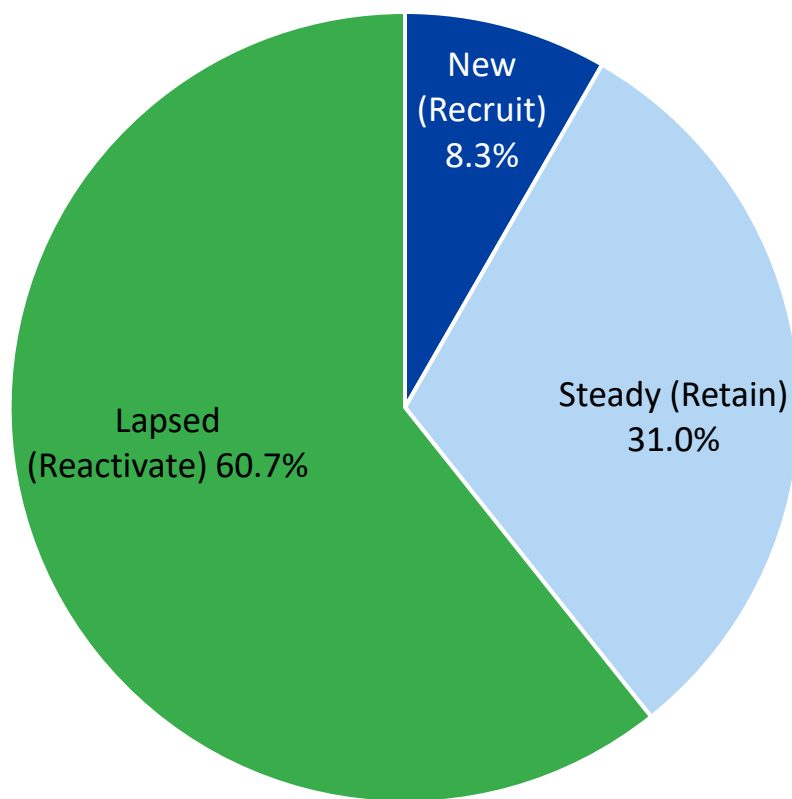
Many anglers reside in urban areas where fishing access is less abundant.

Improving access to and awareness of local fishing opportunities, particularly in urban areas, can help to support the existing angling community, and the initial learning phases someone needs to try fishing.



RESULTS: ANGLER R3 CATEGORY

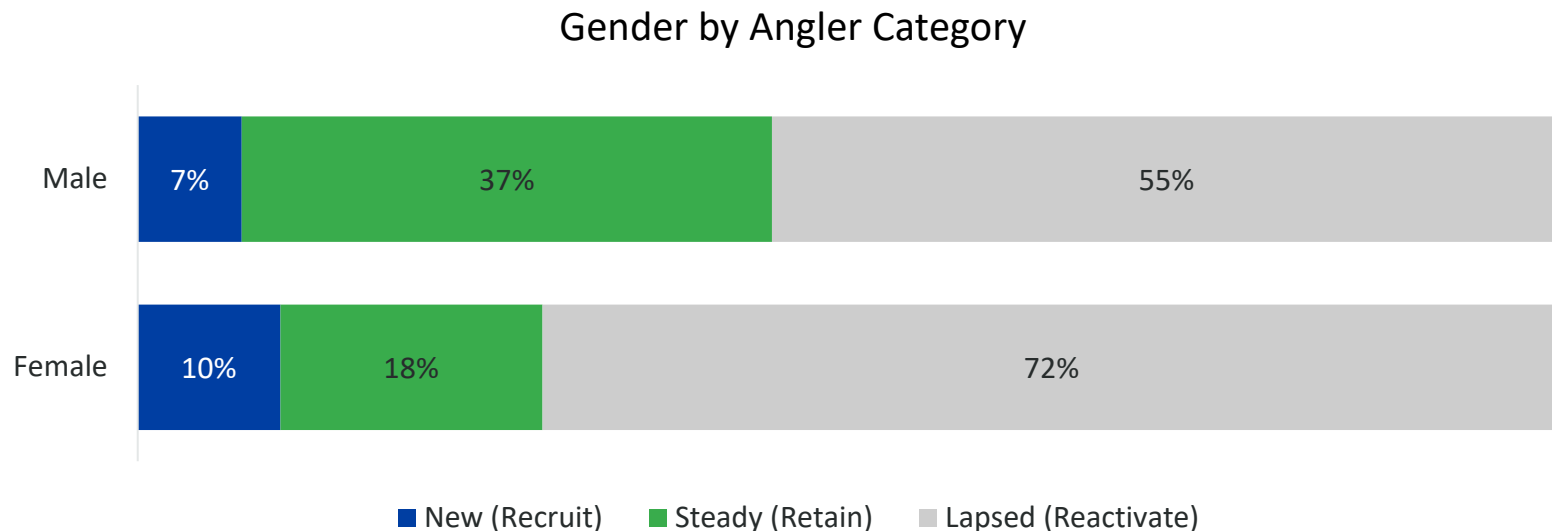
A total of 277,000 anglers were classified into one of the R3 three categories. Over half of South Dakota's angler population is lapsed, meaning they didn't purchase a license in 2023 or 2024 despite having purchased in previous years. This represents a significant opportunity to re-engage with the angling population in the state. In the next pages, we'll explore the gender, age, urban-rural, and geographic specifics of these angler categories.



RESULTS: GENDER BY ANGLER R3 CATEGORY

Like many states, South Dakota's angler population over the last decade is predominantly male, with men comprising roughly three times as many anglers as women. Female anglers are significantly more likely than males to lapse. At the same time, in recent years females are entering fishing at a slightly higher proportional rate than males.

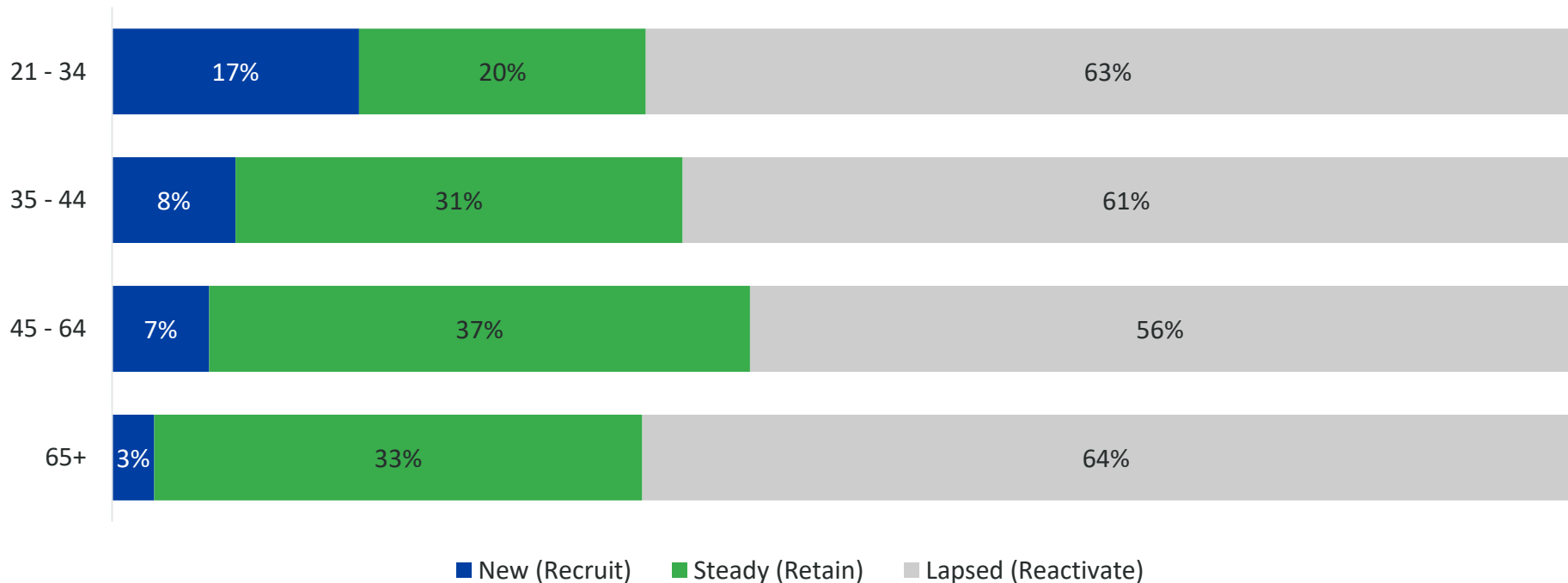
This pattern presents a R3 opportunity for South Dakota. While recruitment of female anglers is gaining momentum, retention remains a critical challenge. Targeted strategies that reduce barriers and support early experiences, such as women-focused fishing programs and mentorship opportunities, could improve retention outcomes and strengthen long-term participation by keeping women on the water.



RESULTS: AGE BY ANGLER R3 CATEGORY

Most steady anglers are in the 45-64 age range; likely, this is because adults in this age range are no longer caretaking young children and they have more time available for recreation. The lapsed angler category has the second highest percentage of 65+ year olds. Seniors age 65 and older are required to purchase a license but can do so at a reduced cost. Despite that the state is experiencing attrition of its oldest anglers.

Age by Angler Category

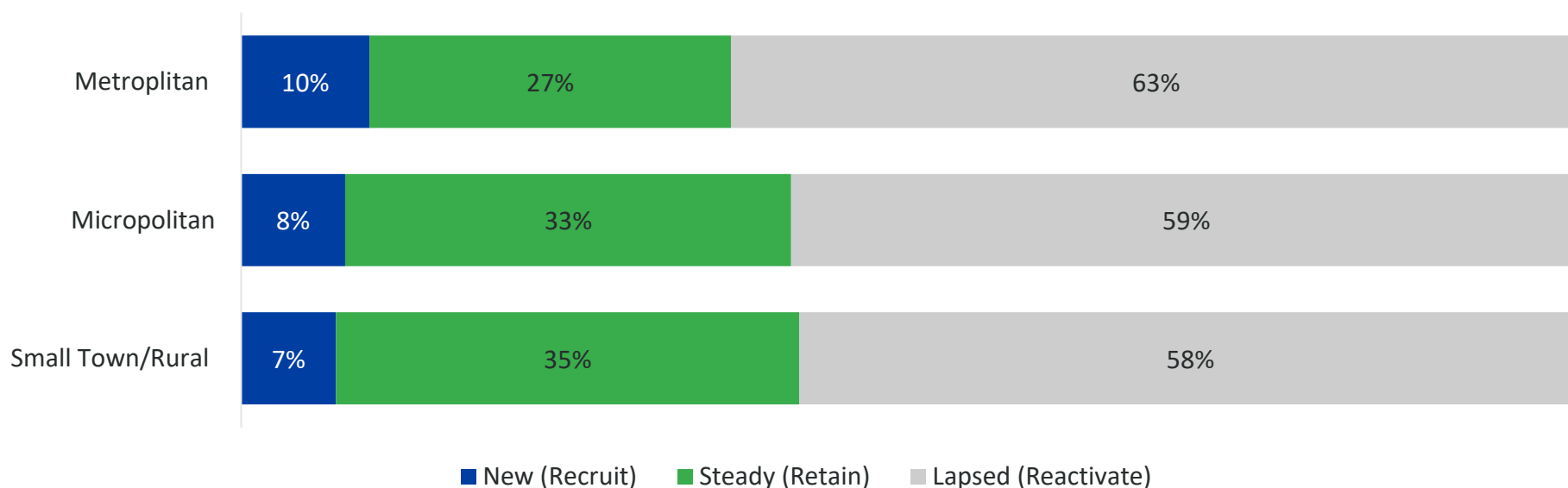


Note: The R3 category system applies age restrictions to ensure multi-year behavior is captured. For example, anglers categorized as “New” in 2025 must be at least 21, which helps exclude individuals who were previously fishing but only recently required a license due to the minimum age requirement of 16.

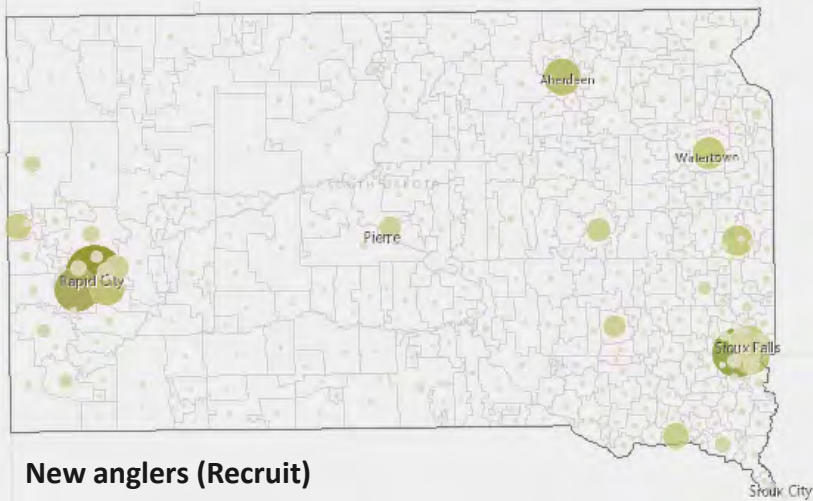
RESULTS: R3 CATEGORY BY URBANIZATION

Anglers living in small town and rural areas are more likely to be steady participants (35%), while those residing in metropolitan areas are slightly more likely to be either new (10%) or lapsed (63%) anglers. This pattern suggests that urban residents are entering fishing but are less likely to continue participation. From an R3 perspective, urban areas represent the greatest opportunity: targeted efforts that support early experiences and reduce barriers for metropolitan anglers could improve retention, while reactivation campaigns in cities could recover a substantial share of lapsed anglers.

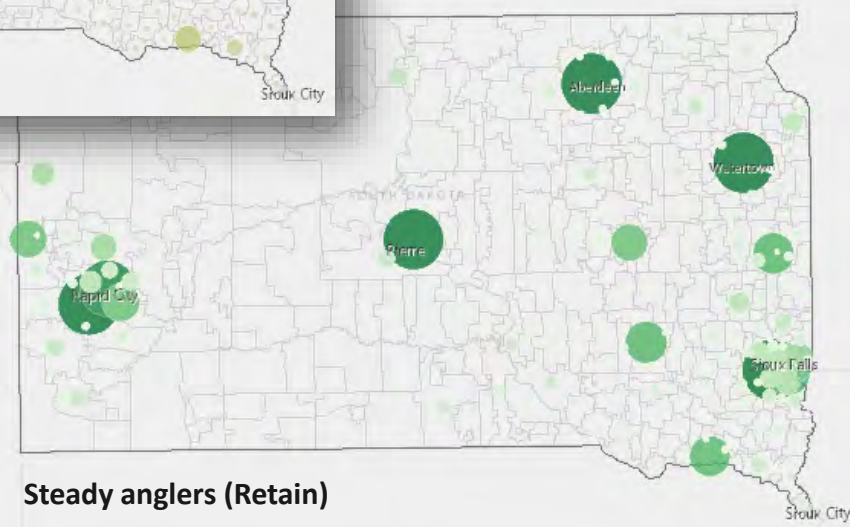
Urban-Rural Classification of Resident License Holder Address by R3 Category



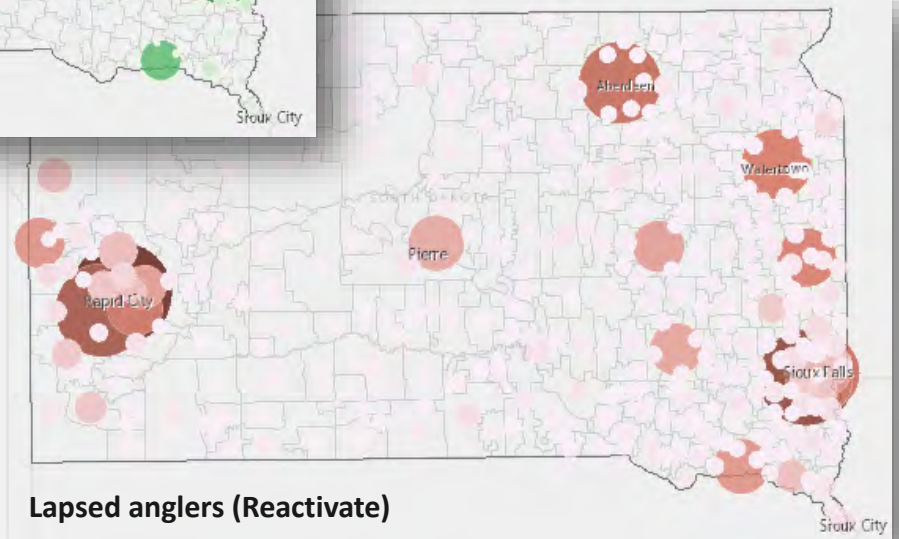
RESULTS: ANGLER CATEGORY BY ZIP CODE



Ultimately, this project is meant to help guide state efforts to find potential new anglers, identify areas where demand for access might be growing, initiate marketing campaigns that focus on those areas, and inform the location of new sportfishing access. Mapping license holders within each R3 category reinforces the finding that new and lapsed anglers are proportionally more likely to reside outside of rural areas.



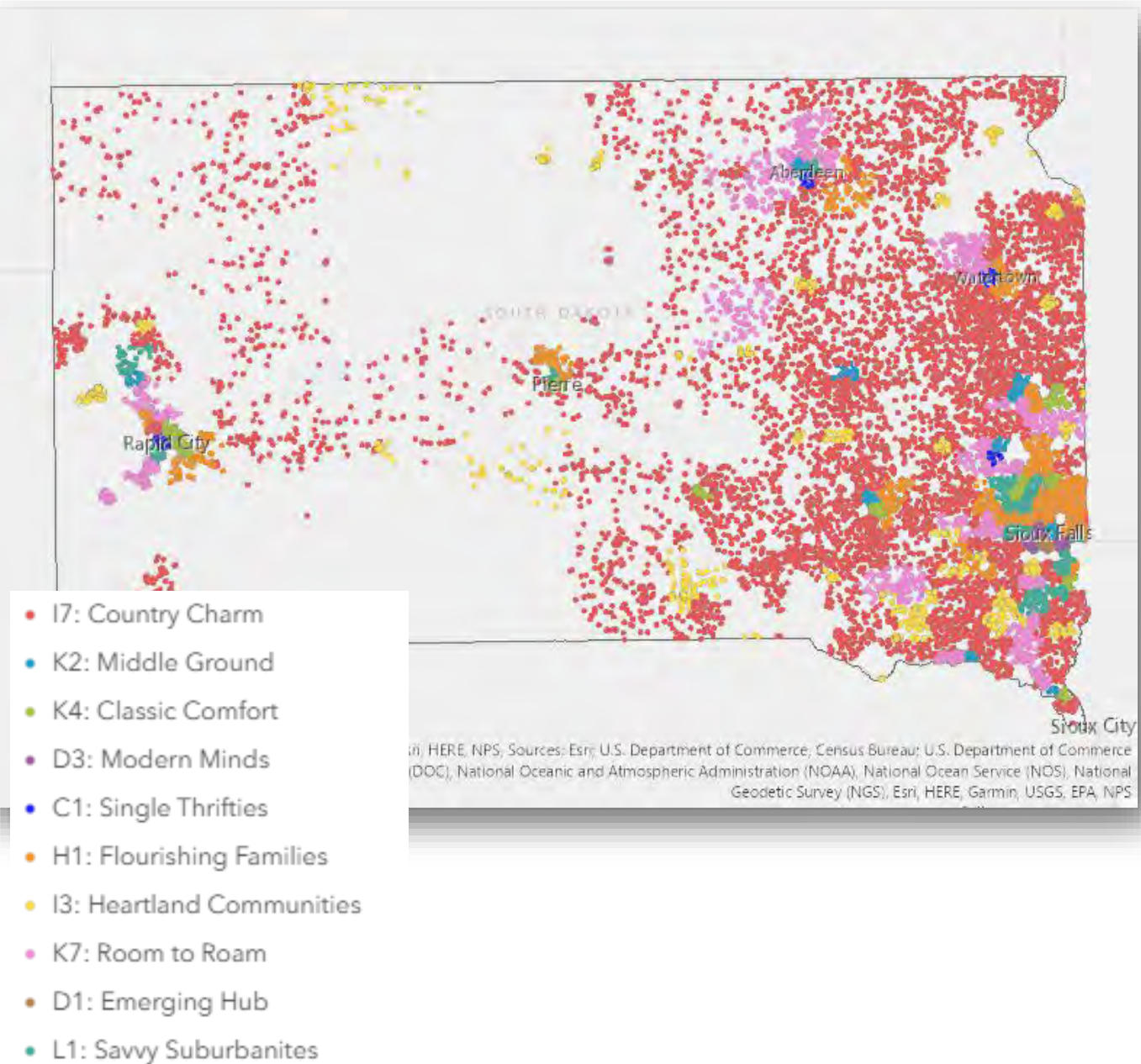
Dots are sized according to total number of anglers in the indicated angler category in that zip code.



RESULTS: TOP ANGLER TAPESTRY SEGMENTS

Significant lifestyle differences can exist between two people of the same age, gender and income. Lifestyle analyses help describe a state's angler population, including their current stages in life, their recreational and hobby preferences, financial status, purchasing, entertainment preferences, and more.

The top ten angler Tapestry segments are mapped here. Areas without a Tapestry segment displayed signify the presence of Tapestry communities with smaller populations within the angler community and/or the overall state population. The results show South Dakota's rich mix of communities.



RESULTS: TOP TAPESTRY SEGMENTS BY CITY

The Country Charm segment made up the highest percentage of anglers in 2023. Middle Ground, Classic Comfort, Flourishing Families and Modern Minds segments round out the top five segments. There has been decreasing participation from within the Country Charm segment, while Classic Comfort and Modern segments have exhibited participation growth. Targeted messaging to the segments experiencing organic growth could support the continued increase in participation from these groups, especially considering the significant growth from Modern Minds. The next page shares more about the Modern Minds segment.

Tapestry Code	Name*	Percent of Anglers in 2023***	Angler Percent Change (2015 -2023)***	Angler Percent Change (2019 – 2023)***	Percent of Total Population (2023)
I7	Country Charm	21.7%	-5.8%	-5.2%	15.1%
K2	Middle Ground**	8.3%	-0.7%	1.6%	5.6%
K4	Classic Comfort	7.7%	2.1%	2.5%	5.9%
H1	Flourishing Families	7.2%	-2.0%	-4.2%	6.8%
D3	Modern Minds**	7.1%	9.4%	9.4%	3.1%
C1	Single Thrifties	6.3%	-0.8%	0.3%	4.2%
I3	Heartland Communities**	6.2%	-7.2%	-4.7%	5.0%
K7	Room to Roam**	5.3%	-4.0%	-5.2%	4.5%
L1	Savvy Suburbanites**	3.9%	-1.0%	-4.9%	4.4%
D1	Emerging Hub	3.7%	4.5%	6.9%	2.3%

**Tapestry Segmentation information can be found in the state companion workbook and via ESRI's Segment Infographics Dashboard.*

*** = segment enjoys outdoor activities*

****Tables developed using a representative sample of all license holders.*

RESULTS: CLASSIC COMFORT TAPESTRY SEGMENT

The Tapestry segmentation process paints a picture of the type of community an angler lives in and identifies their most likely habits and preferences. For example:



Tapestry Segment K4 **Classic Comfort**

7.7% of SD anglers*
5.9% of SD population

- Suburbs of major metropolitan areas with a median age slightly above that of the U.S.
- Families supported by multiple earners
- Tend to buy budget-friendly items from discount local or chain stores
- Often purchase lawn and garden maintenance tools
- Strong enthusiasm for professional, college, and high school sports

With these insights, R3 messaging topics that would best resonate are:

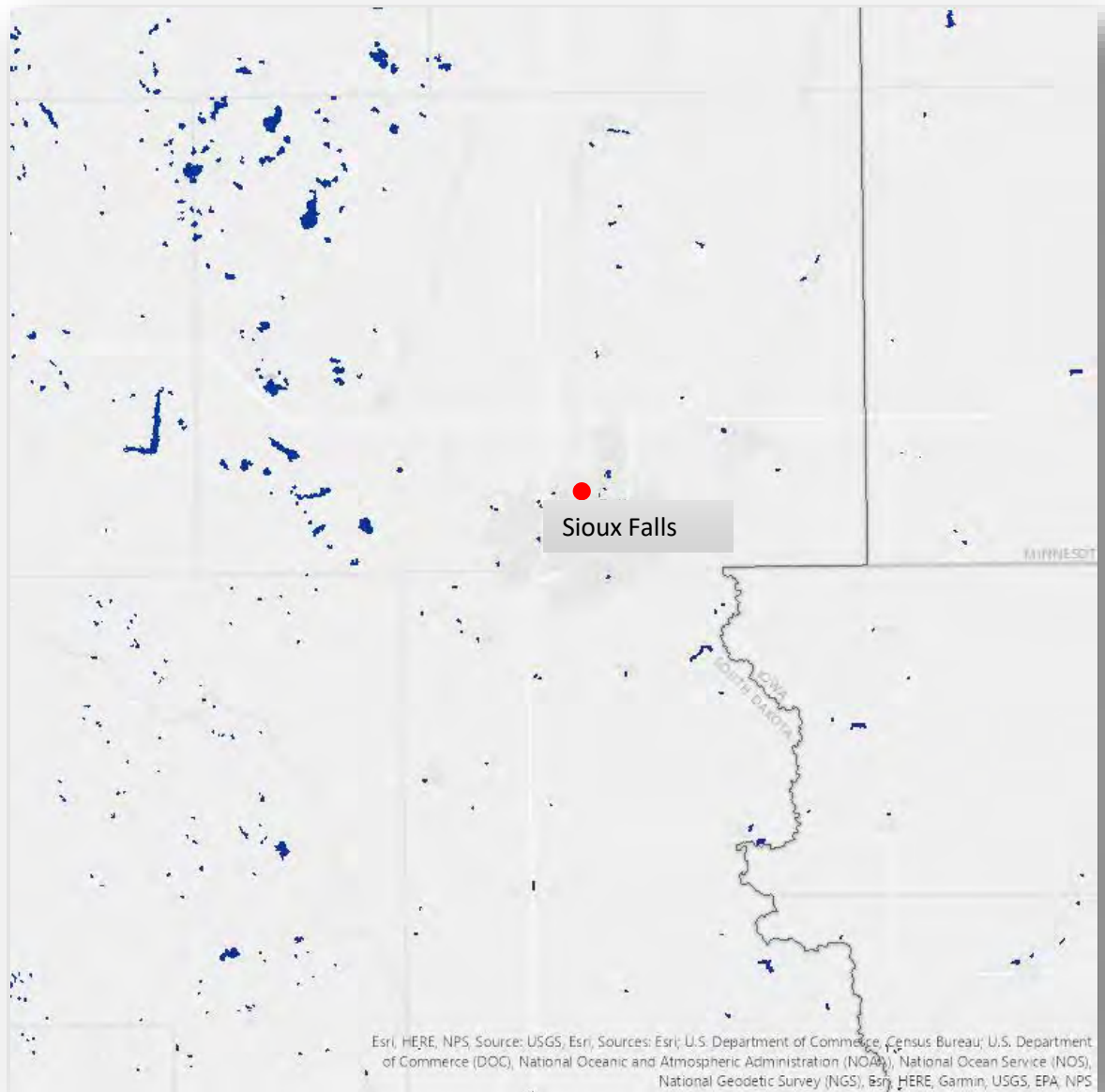
- **Emphasize the health benefits** of spending time outdoors as a family
- **Highlight the affordability** of a local family fishing trip
- **Facilitate opportunities for connection** through social media to share memorable catches.

*Estimates reflect the 2024 population
Data provided by ESRI's Segment Infographics Dashboard.

CASE STUDY: SIOUX FALLS

Agencies frequently reach out to their angler population to encourage license renewals. However, fishing as an outdoor recreational activity competes with a host of other outdoor activities. The results presented in this section can be used to identify the ideal mix of communication strategies which could be used to recruit, retain, and reactivate anglers within the state or targeted areas.

We are using the Sioux Falls and surrounding area as a case study.



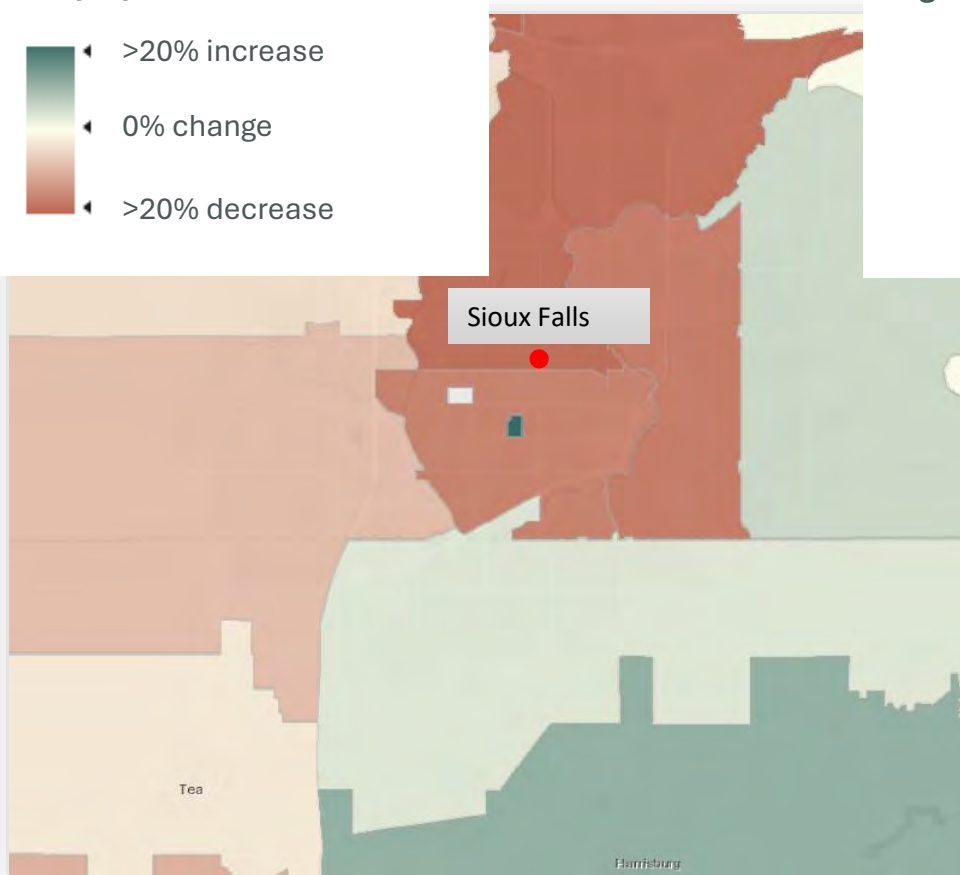
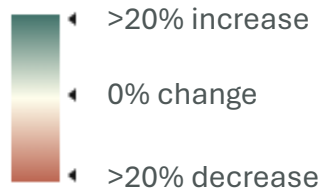
Esri, HERE, NPS, Source: USGS, Esri, Sources: Esri; U.S. Department of Commerce, Census Bureau; U.S. Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), National Geodetic Survey (NGS), Esri, HERE, Garmin, USGS, EPA, NPS

CASE STUDY: SIOUX FALLS ANGLER CHANGE

Over the last nine years, Sioux Falls and the surrounding area experienced some contraction of angler numbers, this occurred despite fishing opportunities in and around the city. In the last four years angler numbers in Sioux Falls and most of the surrounding areas have slightly increased, potentially resulting from recruited and reactivated anglers that started fishing as a result of the COVID-19 pandemic.

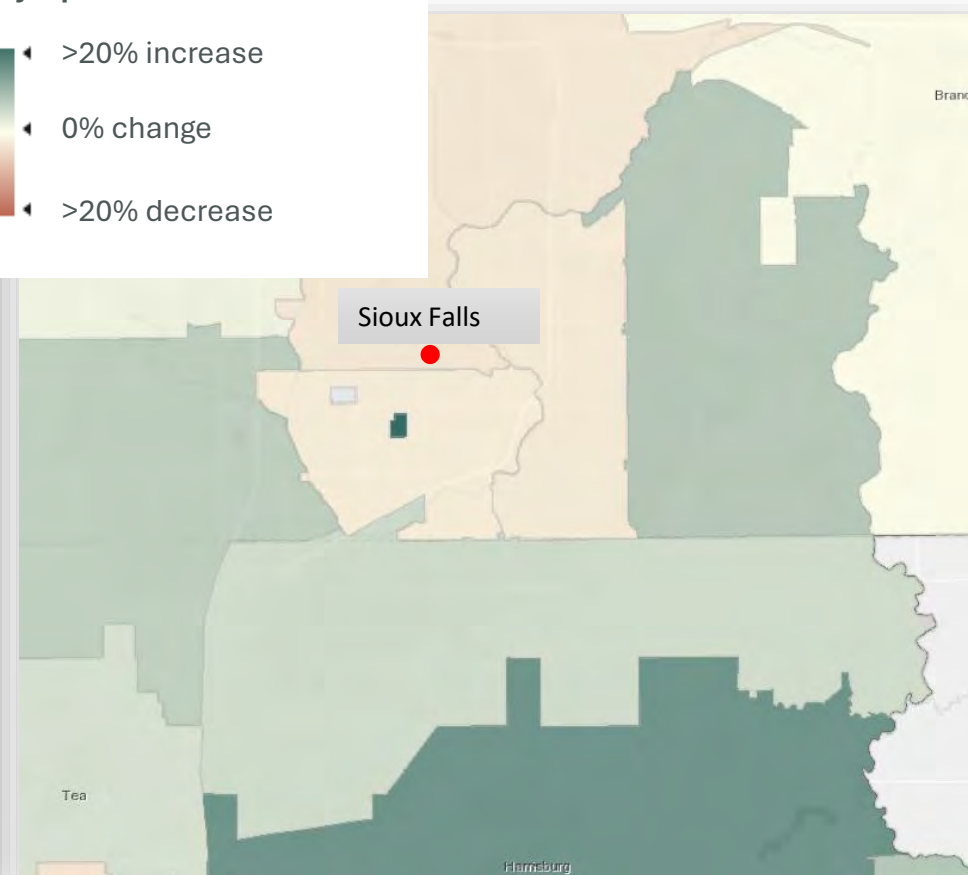
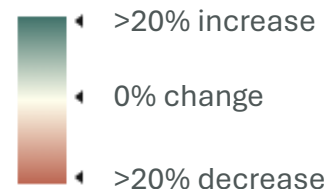
**Nine-year timeframe
(2015 through 2023)**

Percent change in the number of anglers by zip code from 2015-2023



**Four-year timeframe
(2019 through 2023)**

Percent change in the number of anglers by zip code from 2019-2023

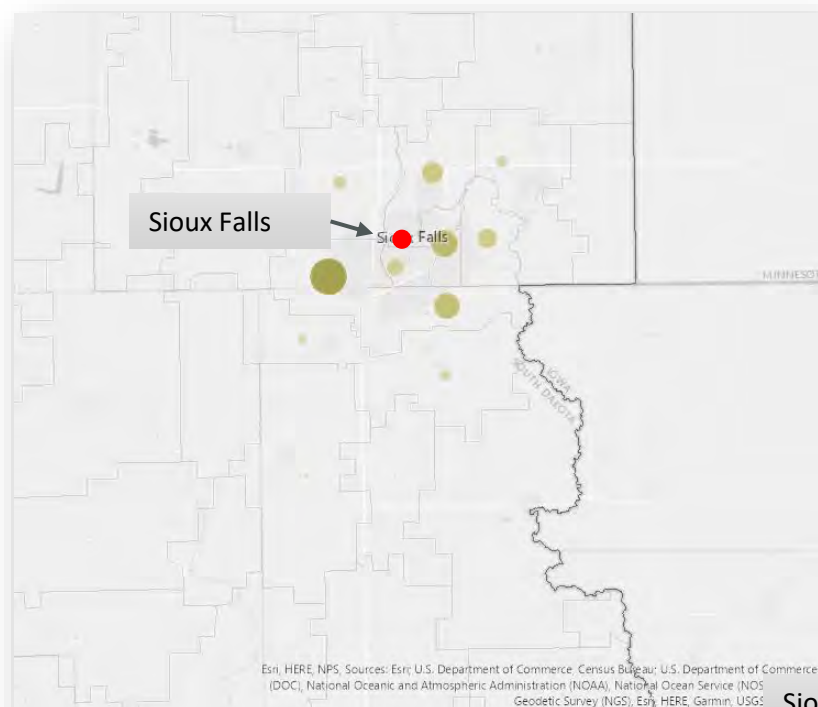


CASE STUDY: ANGLERS BY R3 CATEGORY

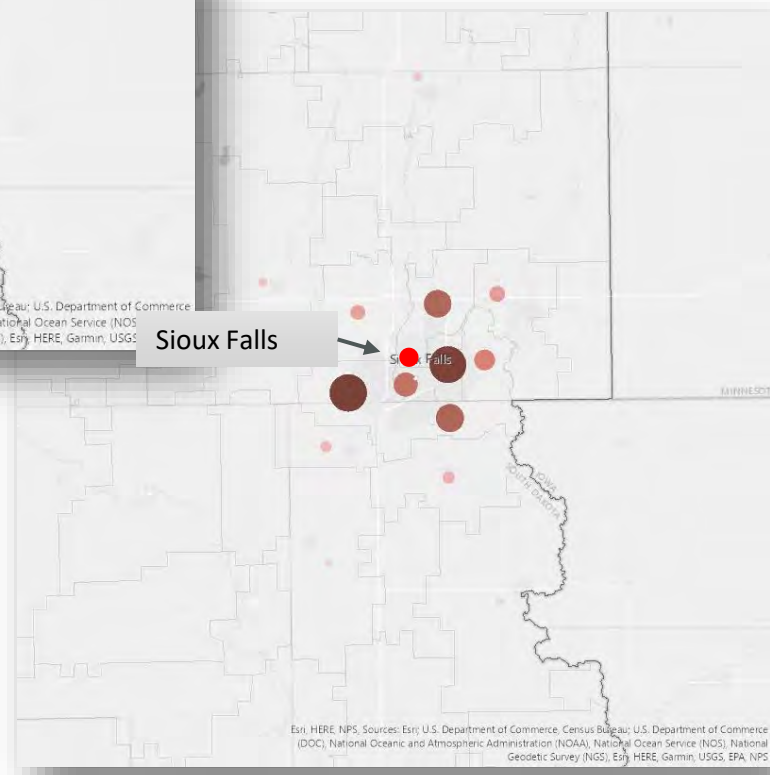
Although Sioux Falls has a strong population of steady anglers, we see there are opportunities with other populations.

By zooming in closer, we see there are large numbers of new and lapsed anglers in and around Sioux Falls.

These anglers are in the same geographic areas, distributed throughout the metro area.



**New anglers
(Recruit)**



**Lapsed anglers
(Reactivate)**

Dots are sized according to total number of anglers in the indicated angler category in that zip code.

Maps developed using a representative sample of all license holders.

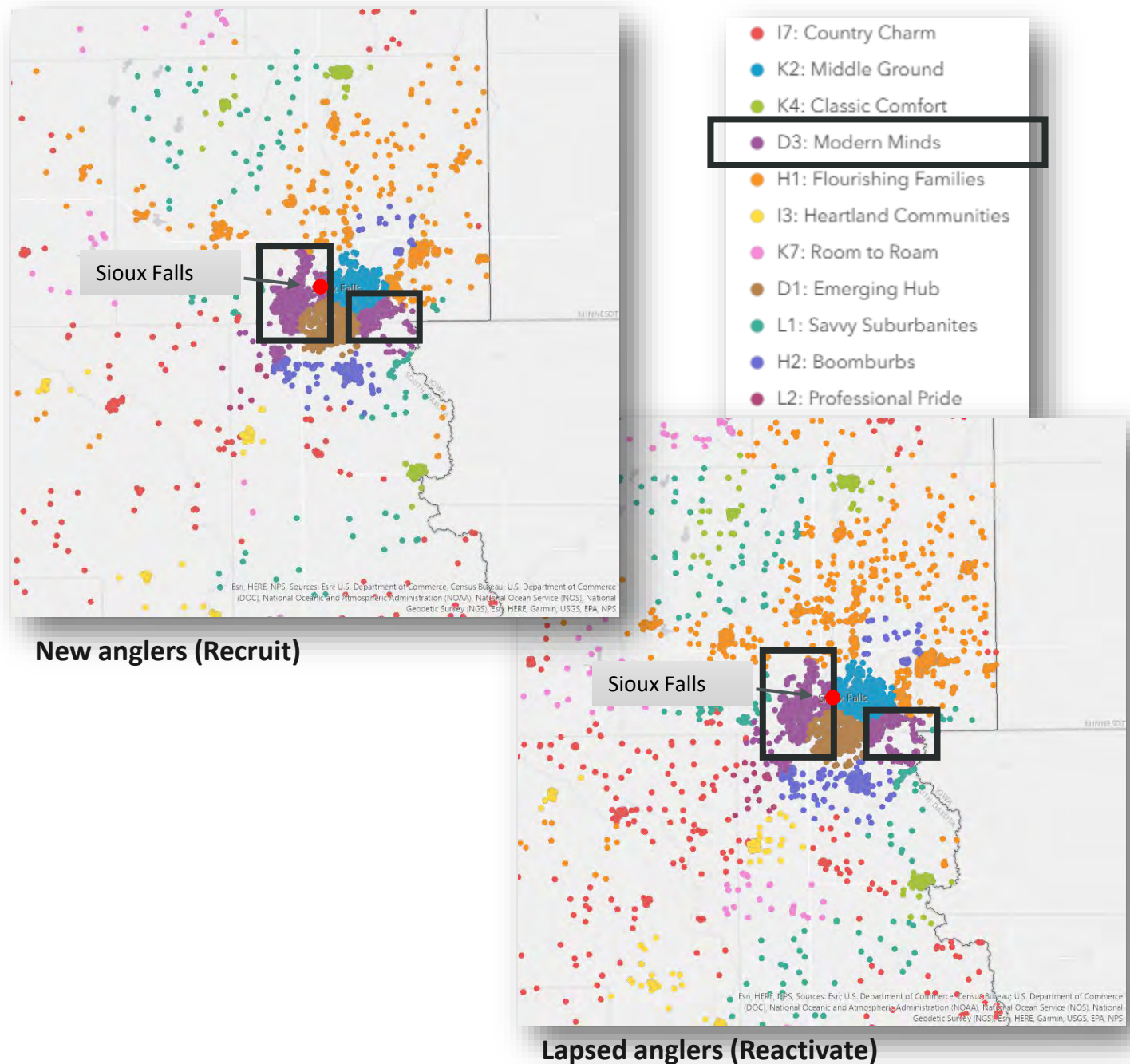
Maps developed using a representative sample of all license holders.

CASE STUDY: ANGLER TAPESTRY SEGMENTS

Tapestry segments for both new and lapsed anglers have a high degree of similarities.

This can be advantageous for marketing efforts because common themes to reengage or spur interest in fishing can be employed across both groups.

For example, communities east and west of the Sioux Falls metro area fit the 'Modern Minds' profile.



Maps developed using a representative sample of all license holders.

CASE STUDY: MODERN MINDS SEGMENT

Typical communities that fit the Modern Minds Tapestry Segment and are described as:

	Tapestry Segment D3 Modern Minds	7.1% of SD anglers* 3.1% of SD population
• Fast-growing segment; located just outside downtown sections of large cities or in nearby suburbs • Mostly in the 25 to 44 age range and half of individuals aged 25 and older hold a bachelor's degree • Mostly in suburban neighborhoods, with roughly one-quarter living in rural areas • Tend to place orders online from warehouse clubs and department stores • Spend money on clothing, travel, and dining out, including fast food • Social media is commonly used for sharing photos and videos, professional networking, and following favorite brands, sports, and hobbies • Tend to explore new exercise and diet regimes and often opt for active vacations		

With these insights, R3 messaging topics that would best resonate are:

- Emphasize **the health benefits of consuming fish** and spending time active in the outdoors
- Facilitate **opportunities for connection** through social media to share favorite species, techniques, and memorable catches.
- Emphasize other **opportunities that exist near fishing areas**— parks, playgrounds, kid-friendly restaurants—as a way for the whole family to unplug.

*Estimates reflect the 2024 population

Data provided by ESRI's Segment Infographics Dashboard.

RECOMMENDATIONS TO ENGAGE ANGLERS

Even if fishing is someone's preferred outdoor activity, it faces stiff competition. Other activities perceived to be easier compete for our time. Outlined below are key recommendations and supporting research to help agencies position fishing as a preferred choice among anglers balancing competing demands on their time.

- **Fishing information should be in one easy to find place.** More than anything, anglers go to the agency website for information. Easy to understand regulations, area fishing maps and nearby fishing opportunities should be readily available. Include boat launches, shore fishing opportunities, and nearby available services, like parks and restaurants.
- **Make fishing trip planning easy.** Helping anglers with planning can recapture lapsed anglers and facilitate participation for new and steady anglers. Pairing fishing with other activities (especially with kids or grandkids) is a great marketing strategy.
- **Put educational material on the state agency website.** New anglers come back when they catch fish. But, they may lack or feel intimidated by the specialized knowledge and equipment required. Prior research has shown state agency websites are the preferred media platform to locate instructional materials ([ASA and Southwick Associates 2025](#)). Agencies should also be active on YouTube.
- **Focus on anglers where they live with marketing materials that truly resonate.** By using Tapestry™ data, marketing and communications teams can identify exactly who they're talking to and the best media channel for people in that area.
- **Additional research resources include:**
 - American Sportfishing Association and Southwick Associates (2025). *Why Anglers Quit and How Can We Improve Retention Rates*. Funded by Multi-State Conservation Grant F24AP00087 as part of the Wildlife and Sport Fish Restoration Programs of the U.S. Fish and Wildlife Service.
 - Recreational Boating and Fishing Foundation and Ipsos (2024). *Psychology of Churn: Understanding Fishing & Boating Attrition*. Funded by the U.S. Fish and Wildlife Service F23AC00806 as part of the Wildlife and Sport Fish Restoration Programs of the U.S. Fish and Wildlife Service.
 - American Sportfishing Association and Southwick Associates (2020). *Angler Personas: Understanding Anglers' Motivations*. Funded by Multi-State Conservation Grant F19AP00114 as part of the Wildlife and Sport Fish Restoration Programs of the U.S. Fish and Wildlife Service.
 - Recreational Boating & Fishing Foundation and Responsive Management (2019). *Actionable Strategies for Angler Recruitment, Retention, and Reactivation*. Funded by Multi-State Conservation Grant F18AP00165 as part of the Wildlife and Sport Fish Restoration Programs of the U.S. Fish and Wildlife Service.



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