



STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
& ENVIRONMENTAL CONTROL
DIVISION OF FISH & WILDLIFE
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Summary of Delaware's 2013 Freshwater Fishing Survey

Dear Angler:

Thank you for participating in the Division's 2013 Freshwater Fishing survey, it is greatly appreciated. The survey, originally initiated in 1978, is conducted approximately every 5 years. The surveys are sent to a percentage of all licensed anglers (resident and non-resident) who indicated they *intended* to fish in Delaware's non-tidal and tidal *freshwater* areas. From this universe of freshwater anglers, names were chosen at random. A computer program selected about 1 in every 3 anglers to receive the survey, so your response was very important to the success of the survey. The information obtained from the survey improves our ability to effectively manage Delaware's freshwater fishery resources. The survey also provides anglers an opportunity to communicate to the Fisheries Section which issues are most important to them. Below is a summary of the survey results which I hope will be useful and informative. The survey takes many months of planning and effort to implement, so thank you for your patience.

Have another great year of fishing!

Sincerely,

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2013 Freshwater Fishing Survey-Summary of Results

Survey Response rate: 28% overall

Survey forms were initially sent to 9,000 anglers, followed by a second mailing to those who didn't respond to the first mailing, which included 7,306 anglers. New in 2013 was the ability to fill out the survey online. At the conclusion of the survey, 2,511 survey forms had been returned or completed online, resulting in a response rate of 28% or about 3 in every 10 anglers. A portion of the anglers who indicated that they intended to fish freshwater did not in the 2013 angling season. Data from the 2,511 survey forms were used to estimate fishing effort and catch in Delaware's freshwaters.

Demographics: Residents age 65 and older most responsive group

The universe of anglers surveyed was broken out into four categories: resident, non-resident, residents age 65 and older, and seven-day license holders. Residents age 65 and older were the most responsive

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group with 53% of those returning a survey. Responses were received from anglers who resided in all three Delaware counties, with the largest percentage (28%) from Sussex County. The majority of non-resident freshwater anglers reside in surrounding states, including: Pennsylvania (16%), Maryland (7%), and New Jersey (3%), although another 23 states were represented. The average age of survey respondents was 47 years for resident, 55 years for non-resident, 71 for residents aged 65 and older, and 51 for seven-day license holders. The survey database did not parse anglers according to sex; however, previous surveys revealed that women comprise just a small percentage of the freshwater angling community. The 2013 demographics appear to be very similar in that regard.

Public Pond Fishing: Most popular type of freshwater fishing

Over 80% of survey respondents reported angling activity in freshwater ponds. The ten most heavily fished (number of trips) public ponds were: Lums Pond, Silver Lake (Dover), Trap Pond, Coursey Pond, Killens Pond, Millsboro Pond, Hearns Pond, Blairs Pond, Becks Pond, and Moores Lake. Non-resident anglers fished most heavily (number of trips) at Masseys Mill Pond, Millsboro Pond, Haven Lake, Trap Pond and Lums Pond. The State Park ponds (Lums and Trap) have camping sites and other amenities that would be expected to draw larger numbers of non-residents. Millsboro Pond and Haven Lake are both easily accessible from major highways. Massey Mill Pond, although just 30 acres and not near any major highways, is only a few miles from the Delaware/Maryland border. One non-resident angler in particular conducted 30 separate fishing trips to the pond. In terms of effort per acre, Becks Pond supported the most fishing trips per acre followed by Blairs Pond and Moores Lake. Over 52% of anglers fishing in ponds utilized a boat and although fishing activity was reported year round, most activity took place between April and September with a peak in June.

Non-tidal and tidal freshwater stream fishing: Sixteen rivers and streams included

Four Piedmont streams (Brandywine, Red Clay, White Clay, and Christina) in New Castle County were listed on the survey form, as were eleven rivers located in Delaware's coastal plain providence and the C&D Canal. Out of these, the most heavily fished by residents was the Nanticoke River system which accounted for nearly 28% of all stream and river fishing activity. The Broadkill River and Marshyhope Creek were also popular fishing areas. The most popular piedmont streams were the Brandywine Creek and Christina River.

The Broadkill River was most popular with non-resident anglers possibly due to proximity to Delaware's coastal resort areas. In addition, there are public access areas upstream near the first dam and downstream near the mouth with many miles in-between of relatively undeveloped shoreline. Non-resident use of the Nanticoke system was also high, likely due to the largemouth bass population and the extensive use of the river for bass fishing tournaments.

The majority (55%) of anglers fishing in streams and rivers utilized shoreline access, while 44 percent indicated they fished from a boat. This group most actively fished between April and September with a slight uptick in activity during June and July.

Trout fishing: White Clay Creek most popular trout fishing location

Trout fishing (primarily brown and rainbow) in Delaware is limited to a put-and-take fishery with six designated trout streams in northern New Castle County, and two ponds, one in each of Kent and Sussex Counties. White Clay Creek supported the greatest proportion of trout angling with over 65% of the effort (number of trips). Consequently, White Clay Creek also provides the most public land available to anglers. The Christina River was the second most popular location although effort and catch was much

reduced compared to White Clay Creek. Newton Pond, a renovated borrow pit that opened in 2009, supported more trout fishing by residents than Tidbury Pond and effort (number of trips=2,408) was greater than four of the six designated trout streams. Non-residents comprised just over 5 % of the trout angling community and the majority of effort took place at White Clay Creek (86% of total trips by non-residents). Non-resident survey respondents did not fish for trout in Newton or Tidbury Ponds.

Over 63,000 catches of trout were reported, with the majority (78%) from White Clay Creek. As expected, the highest rate of catch per trip occurred in the White Clay Creek, followed by the Brandywine River (includes Beaver Run and Wilsons Run). Trout fishing took place year round with a peak in activity during April-June and a secondary peak in October. This coincides with opening season in the streams during early April and additional stocking that takes place in October. Periodic stockings occur from April to the early part of May, with most frequent stockings in the White Clay Creek.

Fish species and catch rates: Largemouth bass most popular warmwater species

The majority of anglers expressed 'no preference' when asked which fish species they targeted. Of those who indicated a preference, largemouth bass were the most sought species in ponds, tidal streams and non-tidal streams by all angler groups (resident, non-resident, residents age 65 and older and seven-day license holders). In addition to largemouth bass; crappie, sunfish and pickerel were the other warmwater species most favored by pond anglers while striped bass, white perch and smallmouth bass were most favored by stream anglers. Freshwater anglers targeting warmwater species typically release their catch; over 96% of fish caught in rivers and streams were released and 98% of fish caught in public ponds were released. This is true of all angler groups (resident, non-resident, residents age 65 and older and seven-day license holders).

Catch per trip (all species combined) for public pond fishing of warmwater species was highest at Horsey's Pond, followed by Records Pond, Craigs Pond and McGinnis Pond. The high catch rate at Records Pond indicates re-stocking efforts have been successful following a draw down to stream level in October of 2012. Total catch (all species combined and regardless of effort) was highest at Horsey Pond (96,663 fish) closely followed by Lums Pond. Other ponds with a high number of fish caught were Trap Pond and Silver Lake (Dover).

Catch per trip (all warmwater species combined) for river and stream fishing was highest for Red Clay Creek followed by Marshyhope Creek and the Nanticoke River. Total catch (all species combined and regardless of the number of trips) was highest by far for the Nanticoke River (254,606 fish) followed by the Broadkill River and Marshyhope Creek.

Issues of concern:

At the end of the survey anglers were asked "What fishing issues do you think are most important in Delaware?". The concerns expressed by anglers were similar to those relayed during the 2009 survey. Responses were categorized and the top five categories of concern were: 1) water quality/fish consumption advisories, 2) increased boat and shore access, 3) fisheries management, 4) litter/trash clean-up, and 5) stocking. Other concerns included a need to increase or improve enforcement, to promote youth fishing, licenses/fees, and a need for more information/education.

A more comprehensive report will be available soon and will be posted along with tables and figures on the Division's website. So please check the website in early 2015 at: <http://de.gov/recfishing>