

**Virginia Game Fish Tagging Program
Year 20 Proposal (2014)**

January 1, 2014 to December 31, 2014

Proposal Submitted to:

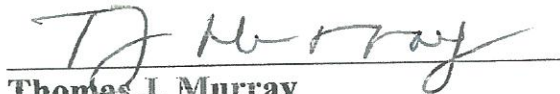
**Virginia Recreational Fishing Development Fund
Virginia Marine Resources Commission
2600 Washington Avenue, Third Floor
Newport News, Virginia 23607**

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VIRGINIA GAME FISH TAGGING PROPOSAL FOR 2014

Overview

Since 1995, the Virginia Game Fish Tagging Program (VGFTP) has coordinated a fish tagging and recapture program and database created from data collected by a dedicated group of trained marine anglers. The program was coordinated from 1995 to 2007 by Claude Bain (VMRC) and Jon Lucy (VIMS). Currently, the program is under the direction of Lewis Gillingham (VMRC, Virginia Saltwater Fishing Tournament (VSFT) Director) and Susanna Musick (VIMS, Marine Advisory Program).

This proposal seeks to continue funding for the project from the Saltwater Recreational Fishing Development Fund during 2014 (Year 20). In complement to the VMRC funds requested in this proposal, the Virginia Institute of Marine Science of the College of William and Mary will provide matching funds.

VIMS and the VMRC share program responsibilities to take advantage of the respective organizations' communication links with the marine recreational angling community and strengths in data analysis and publications. The tagging program's database is housed and maintained at the VMRC. The VSFT has a close association with the Hampton Roads community having been in Virginia Beach from 1995-2008 and now in Newport News. Since 1958, the VSFT has monitored and awarded trophy catches and releases of marine fish in state waters. This mechanism provides regular and trusted contact with anglers, tackle shops and marinas. The mailing protocol used by the VSFT for the trophy catch awards translates well to recapture awards distribution for the tagging program. The VSFT handles tagging and recapture data entry in addition to the awards.

Like the VSFT, VIMS enters tagging and recapture data for the VGFTP. VIMS also conducts regular data analysis for the program and flags questionable data for the program. VIMS provides data summaries and figures for training workshops, annual reports, researchers, fishery managers, anglers and presentations to angling clubs, civic groups and scientific meetings. VIMS is also responsible for ordering, distributing and maintaining tagging equipment for the program including tags, tagging needles and tag applicators and implementing the annual training workshop.

Overall Objectives

The following basic objectives guide program activities:

- (1) Develop and maintain a quality tagging program using a corps of trained angler taggers and direct the tagging effort on select target species to take advantage of significant numbers of non-legal, released fish.
- (2) Direct program tagging effort toward opportunistic occurrences of strong year classes of fish in Virginia's waters when appropriate-especially species not already subject to scientific tagging studies in these waters (such as red drum, black drum, speckled trout, tautog, sheepshead, spadefish, etc.). The program avoids species (e.g. striped bass) already monitored in state waters by tagging studies coordinated by fishery research agencies and institutions.
- (3) Maintain a database of tagged and recaptured fish records accessible to the angling community, but also of use to fishery researchers and managers. Make summaries and reports of data available to the angling community through annual reports, websites, presentations, children's fishing clinics, etc. and provide requested data to researchers and fishery managers.
- (4) Use the tagging program to increase education of marine anglers regarding the importance of reporting tagged fish to enhance the understanding and management of key stocks important to Virginia's marine recreational fisheries.
- (5) Use program results to educate the angling community about fishery conservation and management benefits directly connected with proper handling and releasing of undersized fish. Tag-recapture data show that anglers who regularly use proper catch and release fishing practices have better angling catches.

The program maintains a group of experienced, trained, angler-taggers who can capitalize on opportunities to tag key species that often exhibit high abundance levels during a given fishing season. These events contribute to rebuilding and sustaining specific fisheries in Virginia's one billion dollar recreational fishery and take on even greater value when this program documents sizes and abundance of recreationally-targeted fish and the habitats they utilize.

Program Structure

Participation during any one year is limited to approximately 200 trained taggers to keep the program manageable and to promote quality tagging and data collection. Under this participation level, the need for tags, equipment and the handling of tag-recapture data have been manageable. This number of taggers has worked well to produce useful data on the number and size distribution of tagged fish and a valuable time-series of tag-recapture data for the targeted species. Since 2009, there has been one, centrally-located, annual training workshop.

Annually, in December, taggers are asked to renew their active status in the program for the coming year. Due to various circumstances (moving out of the area, selling their boat, etc.) about 10-30% of participants may become inactive at the end of the year. This change opens up new "slots" for anglers on the waiting list to join the program. The spring tagging training workshop fills these open positions with new taggers.

Just over 20 new taggers were trained in 2012 and approximately 20 more new taggers joined the program in March 2013. The training workshop focuses on program objectives, data recording needs, fish handling and tagging techniques, and hands-on tagging practice with fresh fish. After practicing tagging to the satisfaction of program staff, new taggers are provided tags and tagging equipment (including waterproof data sheets, tagging protocol handouts and fish measuring boards).

Details of Program Responsibilities

In addition to handling the majority of data entry, the VA Saltwater Fishing Tournament office distributes tags, needles, etc. These items are regularly mailed to taggers and records are maintained regarding tag-number series assigned to the participants. This information is important for tracking down late tagged fish data reports for reported recaptures. Similarly, "Fish Recapture Reports" generated from the database are mailed to both the tagger and the angler reporting the recapture (along with the available reward item). This timely feedback loop is critical to the success of the tagging program.

Every tag clearly states that a "REWARD" is offered for reporting recaptures of tagged fish. Appropriate reward items (program caps, sun visors, T-shirts, fish pins, etc.) are mailed to anglers (and commercial fishers and fish dealers reporting tags) by the VSFT office along with fish Recapture Reports. The most popular reward item is the t-shirt, which must be printed in limited numbers each year to stay within budget. Typically, late in the fishing year the T-shirt supply becomes exhausted. Then other reward items are substituted for it (most reporters of recaptured fish understand such issues).

The majority of data for both tagged and recaptured fish are entered into the database at the VSFT office; the data go directly into the database maintained on a server at the VMRC. The VMRC database manager is proactive in contributing to the improvement of tagged and recaptured fish data and outputs. Current options include setting up various reports that provide "single-click" data summaries for review and tracking program results.

VIMS continues to serve as a remote site for entering tagged and recaptured fish data for selected program participants. To relieve some of the workload from the VSFT office, VIMS (Dianne Roberts) enters all data for the program's most productive tagger, Mr. Ed Shepherd. From 2007-2012, Mr. Shepherd has tagged 2,000-10,000 fish annually (10,071 in 2012, Table 1) which resulted in 550-1,000+

recapture reports each year. Ms. Roberts also provides critical feedback to the program regarding data organization, tagging inventory, workshop materials and dissemination preparation. VIMS also distributes tags to tagging program members on the Middle Peninsula.

At VIMS, tagged fish and recapture data records are also checked for possible inconsistencies and errors; the corrected data then are analyzed and formatted for various presentations and reports. Figures demonstrating fish movement and habitat use patterns are also developed for a variety of educational programs (VIMS Marine Science Day, kids fishing clinics, science teachers and public presentations). Data and graphics also are developed in different formats for various program dissemination needs, i.e. VIMS website pages, annual tagging training workshops, posters, annual reports and presentations (angling clubs, civic groups and scientific meetings). Use of the VGFTP as a source of data by fisheries managers has continued to grow. In 2012, the VGFTP again engaged with the VMRC to collect whole catch data on summer flounder. VGFTP data have also been used by state and regional level management groups. The VMRC used VGFTP tagging and recapture data as part of their Atlantic States Marine Fisheries Commission compliance reports for red drum and tautog. VIMS also contributed data for the ASMFC PID (Public Information Document) for black drum. VIMS also served on the ASMFC Black Drum Technical Committee Tagging Workgroup and provided tagging, recapture, mortality, habitat use and size frequency data for the assessment. The VGFTP continues to be an important source of data that is in many cases, not available elsewhere.

Tag and program equipment orders including the construction of fish measuring boards are handled by VIMS. VIMS also periodically conducts tag retention field trials to evaluate whether changes might be warranted regarding the type of tag used for a specific species. Depending on the size range of fish, certain tags are more appropriate for small fish specimens (like the 2.5 in T-bar tag) versus large fish (plastic and stainless steel dart tags). For target species larger than 26-28 inches total length, the program recommends using a 6.25 in. stainless steel dart tag with wire core sheath. (Figure 1).

Since 2008, select taggers have been provided dogleg dart tags (DD tags) and wide-anchor dart tags (DW tags) to trial in speckled trout and red drum. These retention studies of plastic dart tags continue under the guidance of Susanna Musick to examine patterns of times at large (versus T-bar tags). Recapture rates and times at large are being examined to determine if improved retention patterns result from the DD and DW tags.

Target Species: 2000-2012

Target species for 2013 are listed below (unchanged since 2000).

Black Drum	<i>Pogonias cromis</i>
Black Sea Bass	<i>Centropristis striata</i>
Cobia	<i>Rachycentron canadum</i>
Summer Flounder	<i>Paralichthys dentatus</i>
Gray Triggerfish	<i>Balistes caprisacus</i>
Red Drum	<i>Sciaenops ocellatus</i>
Sheepshead	<i>Archosargus probatocephalus</i>
Spadefish	<i>Chaetodipterus faber</i>
Speckled Trout	<i>Cynoscion nebulosus</i>
Tautog	<i>Tautoga onitis</i>

Background and Overall Accomplishments-2012

The tagging program documents annual and year-to-year movement and habitat utilization patterns of selected finfish species in Virginia waters. For certain species, the program documents significant coastal migrations. Many of these species spawn in the lower Bay or nearshore waters of Virginia and use Virginia estuarine and coastal waters as nursery and feeding grounds.

The program's results are of interest to the angling community and to fishery researchers and managers. The number and size distribution of fish tagged each year compliment other research-based data sets and can help fishery managers gain a more comprehensive picture of sizes of fish released in the state's marine recreational fishery.

Tagging effort for flounder, red and black drum, speckled trout, cobia, spadefish, triggerfish and sheepshead primarily occurs in Bay and nearshore coastal waters. However, tagging of tautog, black sea bass, spadefish and gray triggerfish occurs over much broader areas of the Bay and inshore-offshore waters. Tagging for structure-oriented species occurs on sites such as fishing piers, artificial reefs, the Chesapeake Bay Bridge Tunnel complex, shipwrecks and other bottom sites occurring from the lower Bay to sites offshore of Virginia.

Special tagging continues at warm water discharge sites through cooperation with Virginia Dominion Power. Past tagging results at the Yorktown Power Station (York River) and the Center for Energy Conservation Power Station (Elizabeth River) have helped to document these areas as important over-wintering sites for various species, especially speckled trout and red drum.

During 2012, 104 trained anglers tagged fish. In February, "Top Tagger" awards were presented in Hampton at Bass Pro Shops' "Spring Fishing Classic" seminar series. The Tagging Program is fortunate to have a consistent group of anglers dedicating volunteer effort into tagging considerable numbers of fish that result in useful recapture data. The 2012 top taggers are responsible for a major portion of tagged and recaptured fish data each year. The good-natured competition for the annual awards encourages taggers to work at becoming more consistent in their tagging. This consistency helps their chances of making the list of annual award winners for any given year. Trained anglers' tagging accomplishments appear in Table 1 by number of tagged fish. Seventy-six (76) anglers tagged 25 or more fish during 2012; this accounted for about 99 percent of all fish tagged in the year. This participation level was similar to that in 2011. These anglers' consistent efforts produce the majority of data on local and regional habitat use and movement patterns of target species.

Top ranking anglers by total recaptures during 2012 appear in Table 4. The majority (98%) of recaptures reported during the year were accounted for by the 55 taggers listed. As expected, anglers tagging the most fish often have the highest number of recaptures per year. Higher numbers of recaptures are associated with a number of variables including fishing (and tagging) frequency, organizing tags and data sheets to enhance tagging efficiency, and tagging at locations which hold fish for significant periods and which are fished frequently by other anglers.

Select 2012 Results

Through 2012, the program's database included over 220,000 tagged fish records and approximately 23,802 recapture records (Table 2). (*Note: VGFTP data referenced here include summaries of fish tagged and recaptured in terms of the number of *fish* recaptured (Table 2) and the *cumulative* number of *recaptures*, including multiple recaptures of the same fish (Table 3).)

In 2012, the overall fishing effort and resulting tagging effort increased from 2011. The VGFTP had a 63.2% increase in tagging (n=31,642, Table 3) and a 21.1% increase in recaptures (n=2,368, Table 3) from the previous year. Several of the targeted species in the program had an increase in tagging and recapture numbers in 2012. Species with an increase in tagging included cobia (n=437 tags, 11 recaptures) red drum (n=18,371 tags, 1,612 recaptures), sheepshead (n=31 tags), tautog (n=1,037 tags, 100 recaptures), and triggerfish (n=89 tags, 17 recaptures) (Table 3). Of these, red drum had the most impressive increase with 18,371 tags (a 1,392% increase from 2011) and 1,612 recaptures (117% increase from 2011). A large influx of juvenile red drum led to an increase in effort, making red drum the top tagged species for the first time. This is a departure from the previous top species of speckled trout (2010 and 2011) and summer flounder, which ranked as the top tagged species from 2001-2009. Flounder tagging totals were at their lowest levels since 2000. Tagging decreased by 34.2% (n=2,688 in 2011; n=1,773 in 2012). Other species that had lower tagging numbers in 2012 included black drum (n=146

tags, 13 recaptures), black sea bass (n=1,382 tags, 187 recaptures), and speckled trout (n=7,883 tags, 288 recaptures), though speckled trout numbers were still at their second highest levels (Table 3).

Red drum made up 58% of tagging effort in 2012. The large influx of young of the year red drum contributed to a new VGFTP high for species-level tagging with 18,371 tags. These figures should be considered along with other target species numbers, as taggers often devote their effort to the most prevalent species present in an area. While this can sometimes switch effort from some traditionally popular target species (like flounder), it also serves as an important mechanism for documenting seasonal and spatial variability.

These data provided fish movement and site-fidelity patterns of fish captured and released in Chesapeake Bay and Atlantic coastal waters. VGFTP data have also provided an important source of information for marine fisheries management. Since 1995, more than 500 taggers have been trained and participated in the program and fishing effort has been documented at over 900 locations in Virginia waters. New records were set for days at large for the program with one tautog being recaptured a little less than 8 years after tagging. These records illustrate examples of good tag retention and emphasize the uniqueness of the VGFTP as an exceptional source of data regarding recreationally important marine fish. **In 2012, the VGFTP had a record-breaking year with 31,625 tags. This extraordinary effort is possible only because of the dedication of anglers who collect and report data and contribute their time and effort toward building a better picture of Virginia's marine fish.**

Proposed 2013 Activities

1. Tags and tagging equipment will be provided to the program's participants with the primary emphasis of collecting and recording quality data on tagged fish.
2. The VGFTP database will be maintained on the VMRC server and improvements (where necessary) will be addressed such as data sorting and retrieving, automatic report generation and access, and online reporting and tagger record access (making participant's tag and recapture records more accessible to them through a secure process).
3. Continue working with taggers to trial various types of tags that may increase retention (and thereby recapture rates) in species such as speckled trout, red drum, etc.
4. Produce updated materials and results for the program website and create the 2014 Tagging Program Annual Report. Explore preferred methods of dissemination for program participants.
5. Conduct tagging training workshop(s) to bring new anglers into the program (as space permits). Continue updating and improving instructional handouts and presentations to improve training and provide continuing education for existing taggers.

Expected Benefits

The VGFTP data will continue to provide anglers, researchers and fishery managers with historic and recent data describing fish habitat use and seasonal movement patterns for key recreational species. The data may also highlight significant pattern shifts for fish that may warrant special research projects to ascertain whether such changes are significant.

The program will provide the opportunity to tag large numbers of fish on relatively short notice with an experienced group of trained angler-taggers. This circumstance has taken place in the past, especially in regard to juvenile and adult red drum, cobia, summer flounder, speckled trout, spadefish, sheepshead and tautog.

The program will provide improved communication, understanding and cooperation among scientists, managers and anglers regarding tagging programs and the benefits of good reporting rates of recaptured fish. The program delivers relevant information to the angling community and the public about the importance of Virginia's marine recreational fisheries, including the benefits of correct fish handling techniques and effective catch and release fishing on fish resources.

This program has grown to the point where slight budget changes are necessary to provide the equipment needed to supply the participants in the program (e.g. we need to order more tags to keep up with the demand). The ratio of tag types has been adjusted to provide emphasis on the most prevalent tag type and to keep overall equipment costs lower. As the original program design in 1995 never accounted for annual tagging effort of more than 30,000 fish, the VGFTP is at the point where its existing structure is stretched to meet the demand from the angling public. The VGFTP had an all-time high for tagging effort which was a positive achievement that brought certain challenges with it. The large year class of red drum (>18,000 fish) persisted throughout the peak tagging season as did the number of associated recaptures. This resulted in considerable challenges in terms of staff time in regard to processing recapture data and rewards, especially in cases where incomplete or incorrect data were reported. This required follow-up phone calls for validation from VMRC staff. Additionally, the large increase in tagging meant an increase in tags, putting pressure on the VIMS processing and Hallprint production schedule. Future funding may need to account for additional VMRC staff support during peak effort and further emphasis on the VGFTP Online Reporting page: https://www.vasaltwaterjournal.com/report_tagged_fish.php which makes the data reporting and reward process much more efficient.

Annual tagging program reports will continue to offer program results readily accessible to anglers and others interested in tracking marine recreational fisheries in state waters. Accessibility to annual reports will be primarily through the VIMS website (and library) www.vims.edu/vgftp, with links to the site from VMRC webpages and other related fisheries management groups. The VIMS website will continue to be updated in 2013 and 2014 to make it more user-friendly for the taggers and other recreational community members.

The VGFTP database will continue to document changes in relative abundance of various year classes of recreationally-targeted fish in Virginia. It also provides data on the size distribution of sub-legal fish released in Virginia's recreational fishery, patterns of seasonal migrations and habitat use of key fish, including over-wintering areas used by key target species.

Location

The project is located in Virginia and the taggers are Virginia recreational fishermen. All species of fish targeted by the program are recreationally important and found seasonally in the Chesapeake Bay. Tagging efforts will occur in Virginia waters including the Chesapeake Bay and adjacent nearshore and offshore waters.

Annual Report

The annual report for 2012 was completed and submitted to the Recreational Fishing Advisory Board and VMRC staff in May 2013. Limited hard copies are available of the report, though online access is encouraged to reduce printing and paper wastage. Annual reports through 2012 are available on the VIMS VGFTP website: www.vims.edu/vgftp/.

Figure 1. VGFTP Tags and Applicators

Tagging Gun and T-Bar Tags (top photo); Stainless Steel Dart Tag and Applicator (bottom photo)
(Note: coin for scale – 0.75 inches diameter)

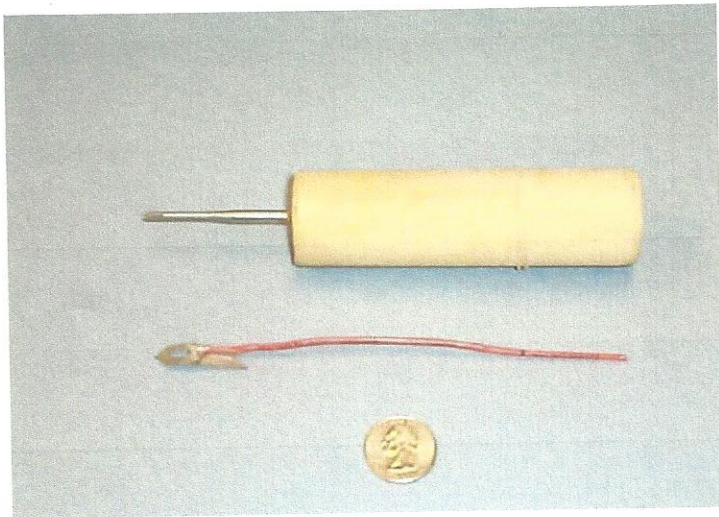


Table 1. VGFTP 2012 Top Taggers: Anglers Tagging >25 Fish

FIRST NAME	LAST NAME	BLACK			RED		SHEEPS-HEAD	SPADE-FISH	SPECKLED TROUT	TRIGGER-		TOTAL
		DRUM	BASS	COBIA	FLOUNDER	DRUM				TAUTOG FISH		
ED	SHEPHERD	14	17	1	266	9987	0	0	414	2	0	10701
SHELDON	AREY	0	0	0	9	80	0	0	2132	0	0	2221
CARL	STOVER	17	16	12	63	1219	0	23	395	0	1	1746
BRANDON	BARTLETT	6	242	87	34	680	4	95	139	45	3	1335
GEORGE	WOJCIK	1	2	0	30	571	0	0	379	0	0	983
TROY	REYNOLDS	0	197	0	0	369	0	39	252	17	2	876
JOHN	TAYLOR	0	3	0	40	775	0	9	44	0	0	871
ROB	COLLINS	5	191	1	46	73	3	13	148	246	63	789
JIM	ROBINSON	34	21	5	37	400	2	0	247	30	2	778
ED	LAWRENCE	0	0	0	7	199	1	0	420	0	0	627
JAY	DUELL	21	21	0	160	227	7	0	184	1	0	621
ERIC	WYNINGS	0	9	3	21	263	0	0	230	0	0	526
WALTER	EHMANN	1	39	0	3	270	0	5	174	0	1	493
SUSANNA	MUSICK	1	9	189	5	36	0	199	25	0	0	464
JIM	DUELL	18	28	0	77	226	3	0	68	0	0	420
DOUG	PURCELL	0	0	0	10	184	0	0	183	0	0	377
MIKE	PERRON	1	151	0	8	4	5	3	77	90	11	350
JON	LUCY	1	15	0	5	129	0	0	179	0	0	329
DAVID	GRIFFITH	3	15	0	7	236	0	0	58	0	0	319
RICK	GUYOT	0	0	0	0	59	0	0	251	0	0	310
HUGH	GREEN	0	0	0	1	202	0	0	102	2	0	307
JEFF	HOTTENSTEIN	0	0	0	44	180	0	0	79	2	0	305
MARVIN	HARDISTY	0	0	0	1	47	0	0	205	0	0	253
RON	DUKE	0	0	0	0	199	0	0	32	0	0	231
JOHN	KNIGHT	3	2	0	80	103	0	0	40	0	0	228
LESTER	BERRY	0	13	0	18	195	0	0	1	0	0	227
SCOTT	VINSON	2	0	0	97	108	0	0	2	0	0	209
MIKE	HANDFORTH	0	0	0	183	22	0	0	0	0	0	205
DONNIE	SMITH	0	0	0	0	38	0	0	159	0	0	197
ROB	CHOI	0	45	0	29	26	3	60	15	15	4	197
JOE	BESSLER	0	0	0	0	35	0	0	156	0	0	191
BARRY	DAVIS	0	0	0	5	30	0	0	155	0	0	190
KEN	SCHULTZ	0	1	0	11	125	0	1	49	0	0	187
DANNY	TAYLOR	0	0	0	80	6	0	0	3	85	0	174
KEN	NEILL	0	0	0	0	0	0	0	0	172	0	172
KEVIN	CRUM	1	0	0	18	24	0	0	110	0	0	153
JOHN	ZARELLA	1	18	0	19	109	0	0	2	0	0	149
BRANDON	POULTER	0	0	0	14	67	2	0	51	0	0	134
SAMUEL	SELLARD	0	44	0	0	22	0	0	0	55	0	121
DAVID	COHN	1	4	0	11	20	0	0	8	70	0	114
JOHN	DUNN	0	0	0	11	0	0	0	102	0	0	113
TRACY	BOYD	0	0	0	14	78	0	0	13	0	0	105
WES	BLOW	2	0	30	0	18	0	0	54	0	0	104
GERALD	HEAD	1	0	0	4	31	0	0	66	0	0	102
THOMAS	EMBRY	0	1	0	14	73	0	0	13	0	0	101
BEN	HOOVER	0	0	0	1	40	0	0	56	0	0	97
DAVID	AGEE	2	8	0	34	11	1	0	0	39	2	97
SUSAN	HARRELL	0	83	0	7	3	0	0	1	0	0	94
JASON	WALTON	0	0	0	58	31	0	0	3	0	0	92

Table 1. VGFTP 2012 Top Taggers: Anglers Tagging >25 Fish *continued*

FIRST NAME	LAST NAME	BLACK DRUM	BLACK SEA BASS	COBIA	RED FLOUNDER	RED DRUM	SHEEPS-HEAD	SPADE-FISH	SPECKLED TROUT	TAUTOG	TRIGGER-FISH	TOTAL
HUNTER	TUCKER	0	24	2	18	41	0	6	0	0	0	91
DAVE	MCNEW	0	0	0	0	3	0	0	76	0	0	79
DAVID	BARNHART	0	0	6	0	9	0	0	60	0	0	75
MATTHEW	BALAZIK	0	0	0	0	75	0	0	0	0	0	75
MARK	NESIUS	0	15	0	7	36	0	0	12	0	0	70
DOUG	WEHNER	0	0	0	1	48	0	0	18	0	0	67
JORJ	HEAD	0	0	66	0	0	0	0	0	0	0	66
BILL	KNAPP	0	4	1	0	17	0	0	16	27	0	65
JEREMY	SEVERCOOL	1	3	4	27	3	0	22	5	0	0	65
ROSS	WOODLEY	0	0	0	0	0	0	0	0	62	0	62
TIM	CANNON	1	43	0	1	11	0	0	0	5	0	61
JOE	SIMONS	0	1	0	5	32	0	0	19	0	0	57
MICHAEL	WINN	0	18	0	6	22	0	0	5	0	0	51
BRIAN	WATKINS	0	4	4	3	23	0	2	11	0	0	47
LANCE	STITCHER	0	0	0	0	0	0	0	0	44	0	44
CHRIS	WILLIAMS	0	11	4	0	6	0	0	17	0	0	38
DOROTHY	ELLIOTT	0	0	0	37	0	0	0	0	0	0	37
BUDDY	NOLAND	0	34	0	0	0	0	0	0	1	0	35
JEREMY	HULCE	0	6	1	3	17	0	0	7	1	0	35
RICK	YAVNER	0	0	0	5	11	0	0	19	0	0	35
PAUL	RICHARDSON	0	0	2	4	6	0	8	13	0	0	33
BEN	CAPPS	0	0	0	2	25	0	0	6	0	0	33
DON	MILLER	1	0	0	0	7	0	0	22	0	0	30
WILLIAM	SHERWOOD	1	5	0	0	20	0	0	2	0	0	28
ANDY	BACKOWSKI	0	0	0	0	20	0	0	7	0	0	27
MATTHEW	MARQUED-ANT	0	0	0	0	5	0	0	21	0	0	26
DONALD	LEVINER	0	0	0	8	17	0	0	0	0	0	25

Table 2. VGFTP Numbers of Fish Tagged and Recaptured, 1995-2012

Year	Black Drum		Black Sea Bass		Cobia		Flounder		Red Drum		Sheepshead		Spadefish		Speckled Trout		Tautog		Trigerfish		Total	
	Recaps	Tags	Recaps	Tags	Recaps	Tags	Recaps	Tags	Recaps	Tags	Recaps	Tags	Recaps	Tags	Recaps	Tags	Recaps	Tags	Recaps	Tags	Recaps	Tags
2012	8	144	166	1,382	11	431	98	1,772	1,426	18,351	0	31	31	493	283	7,874	99	1,035	16	89	2,138	31,602
2011	9	204	303	1,590	8	158	190	2,684	264	1,219	0	18	2	28	761	12,723	77	698	3	13	1,616	19,335
2010	2	84	237	1,003	15	108	434	5,251	274	1,866	2	19	11	87	163	7,285	77	683	17	95	1,232	16,480
2009	5	169	656	3,272	8	36	1,098	9,328	506	3,110	8	225	20	390	97	3,194	108	540	45	133	2,545	20,395
2008	6	186	294	2,684	7	64	769	7,874	456	4,504	2	40	36	300	183	3,275	139	745	69	211	1,959	19,883
2007	33	546	252	1,875	13	71	947	8,615	483	3,353	28	229	69	433	59	2,880	227	954	37	262	2,148	19,219
Total Recaps /Tags	63	1,333	1,908	11,806	62	868	3,536	35,524	3,409	32,403	40	562	169	1,731	1,546	37,231	727	4,655	187	803	11,638	126,914

This report accounts for double tagging and counts the number of fish that were tagged and not the number of tags. Double tag info is valid for 2008 and after. For recaptures, this report counts the number of fish recaptured and does **not** count multiple recaptures of the same fish. The first column under each species is the number of recaptured fish and the second column is the number of tagged fish.

*This table also includes 190 cobia and 199 spadefish that were tagged as part of a special cooperative study with the Virginia Tech Virginia Seafood Agriculture Research and Extension Center in 2012.

Table 3. VGFTP Cumulative Numbers of Fish Tagged and Recaptured, 1995-2012

Year	Black Drum		Black Sea Bass		Cobia		Flounder		Red Drum		Sheepshead		Spadefish		Speckled Trout		Tautog		Triggerfish		Total	
	Recaps	Tags	Recaps	Tags	Recaps	Tags	Recaps	Tags	Recaps	Tags	Recaps	Tags	Recaps	Tags	Recaps	Tags	Recaps	Tags	Recaps	Tags	Recaps	Tags
2012	13	146	187	1,382	11	437	103	1,773	1,612	18,371	0	31	37	493	288	7,883	100	1,037	17	89	2,368	31,642
2011	10	214	482	1,590	8	158	200	2,688	282	1,226	0	18	2	28	889	12,732	79	698	3	13	1,955	19,365
2010	2	85	374	1,003	15	108	464	5,255	294	1,885	2	21	12	87	177	7,291	78	683	17	95	1,435	16,513
2009	5	172	1,012	3,274	8	36	1,265	9,348	544	3,133	8	25	20	391	99	3,203	110	541	46	176	3,117	20,499
2008	6	192	332	2,687	8	66	866	7,896	509	4,925	2	40	41	300	215	3,520	145	745	76	212	2,200	20,583
2007	36	546	292	1,875	13	71	1,060	8,615	511	3,364	41	229	73	433	60	2,929	238	955	47	262	2,371	19,280
2006	28	288	260	1,269	26	187	793	6,218	361	4,153	0	176	28	221	51	1,952	309	2,081	32	79	1,925	16,627
2005	4	205	107	686	4	98	621	6,123	42	794	3	185	21	173	29	1,149	133	822	4	23	973	10,258
2004	5	232	70	1,012	5	184	648	7,286	23	502	27	274	43	299	26	990	119	1,221	41	193	1,016	12,193
2003	5	176	88	922	11	14	397	3,704	33	2,270	0	6	26	236	8	361	59	497	12	31	963	8,219
2002	15	188	231	1,732	15	63	317	3,566	193	2,752	1	10	55	470	23	1,247	129	653	23	56	1,053	10,741
2001	4	395	280	1,913	19	87	636	6,880	27	295	1	7	49	533	13	486	149	951	2	14	1,215	11,599
2000	5	109	294	2,009	10	65	161	2,603	173	1,124	1	12	60	523	11	362	156	713	0	0	912	7,519
1999	7	90	384	2,139	16	59	4	4	135	1,073	0	0	25	233	16	521	356	1,923	0	0	973	6,049
1998	8	196	455	2,655	13	73	3	28	92	551	0	0	38	476	29	495	226	1,347	0	0	881	5,824
1997	2	72	48	592	9	108	2	38	44	438	0	0	36	547	12	440	77	914	0	0	233	3,150
1996	3	85	0	0	9	75	0	6	4	92	0	0	8	189	4	409	74	543	0	0	102	1,400
1995	37	200	0	0	2	50	0	3	2	66	0	0	25	193	14	601	30	260	0	0	110	1,374
Total Recaps /Tags	195	3,591	4,896	26,739	202	1,939	7,540	72,034	4,881	47,014	86	1,234	599	5,845	1,964	46,571	2,567	16,584	320	1,243	23,802	222,895
Overall Recapture Rate	5.43%		18.31%		10.42%		10.47%		10.38%		6.97%		10.25%		4.22%		15.48%		25.74%		10.68%	

For recaptures, this table counts the total number of recaptures, including recaptures of the same fish. The first column under each species is the number of recaptured fish and the second column is the number of tags.

*This table also includes 190 cobia and 199 spadefish that were tagged as part of a special cooperative study with the Virginia Tech Virginia Seafood Agriculture Research and Extension Center in 2012.

Table 4. VGFTP 2012 Top Taggers: Anglers Who Had >5 of their Tagged Fish Recaptured

FIRST NAME	BLACK LAST NAME	BLACK SEA DRUM	BLACK SEA BASS	COBIA	FLOUNDER	RED DRUM	SHEEPS- HEAD	SPADE- FISH	SPECKLED TROUT	TAUTOG	TRIGGER- FISH	TOTAL
ED	SHEPHERD	9	3	0	16	998	0	0	22	0	0	1048
CARL	STOVER	1	0	0	2	96	0	2	9	0	1	111
SHELDON	AREY	0	0	0	1	13	0	0	80	0	0	94
JOHN	TAYLOR	0	0	0	4	73	0	0	7	0	0	84
ROB	COLLINS	0	37	0	1	4	0	5	6	20	9	82
JIM	ROBINSON	0	2	1	1	59	0	0	13	1	2	79
BRANDON	BARTLETT	0	19	1	0	27	0	20	8	2	0	77
TROY	REYNOLDS	0	14	0	0	37	0	2	13	0	1	67
MIKE	PERRON	0	35	0	2	0	0	0	0	7	3	47
WALTER	EHMANN	1	4	0	0	30	0	1	8	0	0	44
GEORGE	WOJCIK	0	0	0	2	30	0	0	10	0	0	42
JIM	DUELL	1	7	0	5	23	0	0	1	0	0	37
LESTER	BERRY	0	8	0	1	20	0	0	0	0	0	29
KEN	NEILL	0	1	0	0	0	0	0	0	26	0	27
JOHN	KNIGHT	0	1	0	10	14	0	0	0	0	0	25
JAY	DUELL	1	2	0	7	9	0	0	4	0	0	23
ED	LAWRENCE	0	0	0	1	8	0	0	13	0	0	22
DOUG	PURCELL	0	0	0	0	14	0	0	5	0	0	19
DAVID	COHN	0	0	0	1	0	0	0	1	16	0	18
RICK	GUYOT	0	0	0	1	10	0	0	5	2	0	18
BILL	KNAPP	0	0	0	0	3	0	0	2	12	0	17
ERIC	WYNINGS	0	0	0	3	11	0	0	3	0	0	17
JON	LUCY	0	0	0	0	10	0	0	5	0	0	15
JOHN	DUNN	0	0	0	2	0	0	0	12	0	0	14
DONNIE	SMITH	0	0	0	0	4	0	0	9	0	0	13
HUNTER	TUCKER	0	9	0	2	2	0	0	0	0	0	13
BRANDON	POULTER	0	0	0	3	9	0	0	1	0	0	13
ROB	CHOI	0	2	0	3	2	0	2	1	2	1	13
BARRY	DAVIS	0	0	0	0	3	0	0	10	0	0	13
MARVIN	HARDISTY	0	0	0	0	4	0	0	7	0	0	11
KEVIN	CRUM	0	0	0	2	1	0	0	7	0	0	10
SUSAN	HARRELL	0	7	0	0	2	0	0	0	0	0	9
MIKE	HAND-FORTH	0	0	0	8	1	0	0	0	0	0	9
SCOTT	VINSON	0	0	0	7	2	0	0	0	0	0	9
JOHN	ZARELLA	0	3	0	1	5	0	0	0	0	0	9
SUSANNA	MUSICK	0	0	2	0	4	0	0	2	0	0	8
THOMAS	EMBRY	0	0	0	0	8	0	0	0	0	0	8
MARK	SPENCER	0	0	0	0	1	0	0	6	0	0	7
WILLIAM	SHERWOOD	0	3	0	0	4	0	0	0	0	0	7
HUGH	GREEN	0	0	0	0	4	0	0	3	0	0	7
JORJ	HEAD	0	0	6	0	0	0	0	0	0	0	6
JEREMY	HULCE	0	2	0	0	4	0	0	0	0	0	6
JEREMY	SEVERCOOL	0	2	0	3	0	0	0	1	0	0	6
MATTHEW	BALAZIK	0	0	0	0	6	0	0	0	0	0	6
BEN	HOOVER	0	0	0	0	2	0	0	4	0	0	6
DAVID	GRIFFITH	0	0	0	0	4	0	0	2	0	0	6
KEN	SCHULTZ	0	0	0	1	5	0	0	0	0	0	6
SAMUEL	SELLARD	0	6	0	0	0	0	0	0	0	0	6
JEFF	HOTTEN-STEIN	0	0	0	2	4	0	0	0	0	0	6

Table 4. VGFTP 2012 Top Taggers: Anglers Who Had >5 of their Tagged Fish Recaptured *continued*

FIRST NAME	LAST NAME	BLACK DRUM	BLACK SEA BASS	COBIA	FLOUNDER	RED DRUM	SHEEPS-HEAD	SPADE-FISH	SPECKLED TROUT	TAUTOG	TRIGGER-FISH	TOTAL	
TRACY	BOYD	0	0	0	0	4	0	0	0	1	0	0	5
MARK	NESIUS	0	5	0	0	0	0	0	0	0	0	0	5
GERALD	HEAD	0	0	0	1	1	0	0	0	3	0	0	5
RICK	YAVNER	0	0	0	2	3	0	0	0	0	0	0	5
BUDDY	NOLAND	0	5	0	0	0	0	0	0	0	0	0	5
ELMER	DIGGS	0	3	0	0	2	0	0	0	0	0	0	5

Virginia Game Fish Tagging Program
Virginia Institute of Marine Science
Proposed Budget for January 1, 2014 to December 31, 2014

BUDGET CATEGORY	VMRC	MATCH	TOTAL
I. Salaries			
a. Marine Recreation Specialist 1.5 mm/1.65 mm	\$ 7,580	\$ 8,338	\$ 15,917
\$60,638 Per Year			
\$5,053 Per Month			
b. Data Technician, TBN 1 mm	\$ 3,154	\$ -	\$ 3,154
\$37,854 Per Year			
\$3,154 Per Month			
Subtotal	\$ 10,734	\$ 8,338	\$ 19,072
II. Fringe Benefits (40%)	\$ 4,294	\$ 3,335	\$ 7,629
Total Salaries and Fringe Benefits	\$ 15,028	\$ 11,673	\$ 26,701
III. Communications	\$ 1,000	\$ -	\$ 1,000
(Annual Report, Website/Recapture Updates, Promotional Publications, Mobile communications)			
IV. Travel	\$ 2,000	\$ -	\$ 2,000
(Local travel for field work, Tagging work group meetings, presentations at scientific meetings and association clubs.)			
V. Supplies	\$ 20,575	\$ -	\$ 20,575
25,000 T-Bar Tags @\$0.65*	\$ 16,250		
500 Plastic Dart Tags @0.88	\$ 440		
1,000 Steel Dart Tags @\$2.70	\$ 2,700		
15 Steel Tagging Needles @\$15	\$ 225		
30 Tagging Guns @\$30	\$ 900		
20 Tagging Needles @\$3	\$ 60		
Subtotal	\$ 20,575		
VI. Total Direct Costs	\$ 38,603	\$ 11,673	\$ 50,276
VII. Indirect Costs - 25% VMRC	\$ 9,651	\$ -	\$ 9,651
Indirect Costs - 44% on Match	\$ -	\$ 5,136	\$ 5,136
Indirect Costs - 19% from Direct	\$ -	\$ 7,335	\$ 7,335
VIII. TOTAL PROJECT COSTS	\$ 48,254	\$ 24,143	\$ 72,397
50% Required Match		\$ 24,127	

Virginia Game Fish Tagging Program

Budget – 2014

VMRC Portion

The majority of the VMRC portion of the budget is returned to the angling public in the form of tagging awards and information, delivery charges (UPS and USPS) and shipping supplies (96%).

Tagging awards consist primarily of rewards sent to the general public for reporting tag recapture information but also include costs for data sheets, Conservation Certificates and Plaques that are provided to the volunteer taggers. To cover the increase of certain reward items (hats, t-shirts and tackle organizers) plus increase in UPS shipping (roughly 10%) we request an additional \$1,680 over the 2011 budget (no increases were requested in 2012 or 2013). Below is the breakdown by category and item.

Tagging Awards

720 Hats @ \$6.75 each	4860
720 T-Shirts @ \$7.00 each	5040
250 Pewter Fish Pins @3.00 each	750
1200 Decals @ .85 each	1020
600 Digital Stickers @ 1.75 each	1050
500 Tackle Organizers @ 3.50	1750
12 Tag Plaques @ \$14 each	168
Conservation Certificates	500
Data Sheets and Cards	<u>600</u>
Total	15,738

Postage and Shipping

U. S. Postage	1560
UPS Shipping	<u>9860</u>
Total	11,420
Supplies (Paper, Envelopes, Mailers, Tape, Bubble Wrap etc.)	1060
Travel	<u>1200</u>
Total	2260
<u>Grand Total</u>	29,418

Virginia Game Fish Tagging Program

Budget – 2014

VMRC Portion

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