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Virginia Game Fish Tagging Program
Year 23 Proposal (2018)

January 1, 2018 to December 31, 2018

Proposal Submitted to:

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

Proposal Submitted by:

Marine Advisory Services
Virginia Institute of Marine Science
College of William and Mary
Gloucester Point, Virginia 23062

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Susanna Musick
Principal Investigator
804-684-7166

_____

David Rudders
Interim Director for Advisory Services
804-684-7531

_____

Katherine H. Davis Small
Assistant Director, Sponsored Programs
804-684-7029

_____

Mark Luckenbach
Associate Dean for Research
and Advisory Services
804-684-7108

VIRGINIA SALTWATER RECREATIONAL FISHING DEVELOPMENT FUND SUMMARY PROJECT APPLICATION

Please complete all fields. This page should be used as a coversheet for a detailed application.

NAME AND ADDRESS OF APPLICANT:	PROJECT LEADER (name, phone, email):
Susanna Musick	Susanna Musick
VIMS-Marine Advisory Program	804-684-7166
P.O. Box 1346	susanna@vims.edu
Gloucester Point, VA 23062	

DESCRIPTIVE TITLE OF EVENT:	PROJECT LOCATION:
VIRGINIA GAME FISH TAGGING PROGRAM	All Virginia (marine) waters

BRIEF PROJECT SUMMARY: (include a detailed description of activity as an attachment)

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. This proposal seeks to continue funding for the project from the Saltwater Recreational Fishing Development Fund during 2018 (Year 23). 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.).

(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.

EXPECTED BENEFITS: (Describe how your project directly benefits the average Virginia recreational angler)

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.

SUMMARY COSTS: (Please attach a detailed budget including all sources of recipient funding)

SUMMARY COSTS

Requested VMRC Funding:	$ 53,553
Recipient Funding:	$ 26,778
Total Costs:	$ 80,332

VIRGINIA GAME FISH TAGGING PROPOSAL FOR 2018

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 cooperative program is currently managed by Susanna Musick (VIMS, Marine Advisory Program) and Lewis Gillingham (VMRC, Virginia Saltwater Fishing Tournament (VSFT) Director).

This proposal seeks to continue funding for the project from the Saltwater Recreational Fishing Development Fund during 2018 (Year 23). 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.

Twenty-one new taggers joined the program on April 5, 2017. 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 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).

Tagged and recaptured fish data are reported and 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, a VIMS data technician enters all data for the program's most productive tagger, Mr. Ed Shepherd, who regularly provides at least one-third of tagging data annually. From 2007-2016, Mr. Shepherd has tagged 2,000-10,000 fish annually, which resulted in 550-1,000+ recapture reports each year. VIMS also coordinates all equipment orders and distributes tags to program members on the Middle Peninsula.

VIMS staff produce all VGFTP reports and data queries; tagged fish and recapture data records are also checked for possible inconsistencies and errors; the corrected data then are analyzed and formatted for each report or presentation. Displays 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, angling summits, etc.). Data and graphics also are developed and presented 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 and VGFTP data are 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 has 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 also handled by VIMS. VIMS 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 wide-anchor dart tags (DW tags) to trial in speckled trout and red drum. These retention studies of plastic dart tags continue under the supervision of Susanna Musick to examine patterns of times at large (versus T-bar tags). Recapture rates and times at large are examined regarding tag retention patterns from the DD and DW tags.

Target Species: 2000-2018
Target species for 2018 are listed below (unchanged since 2000).

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

Background and Overall Accomplishments-(April 2017)
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 important 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 overview of the sizes of fishes 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.

In 2016 (data accurate through April 6, 2017), 86 trained anglers tagged fish. Earlier this year, in February, "Top Tagger" awards were presented in Hampton at Bass Pro Shops' "Spring Fishing Classic" seminar series. The top taggers are responsible for a major portion of tagged and recaptured fish data each year (Table 1). 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. In 2016, 55 anglers tagged 25 or more fish; this accounts for about 98 percent of all fishes tagged in the year. These anglers' consistent efforts produce the majority of data on local and regional habitat use and movement patterns of target species.

In 2016, 62 taggers reported recaptures, with (93%) of recaptures reported by the top 20 taggers (Table 2). 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 2016 Results
Through April 2016, the program's database included over 283,025 tag records and 31,017 recapture records (Table 3). In 2016, the VGFTP had a 24% increase in tagging (n=15,898 tags, Table 3) and a 6.4% increase in recaptures (n=1,660) from the previous year. Species with an increase in tagging included black sea bass (n=2,949 tags, n=1,127 recaptures); cobia (n=471 tags, 67 recaptures); red drum (n=1,802 tags, 97 recaptures); speckled trout (n=8,434 tags, 56 recaptures) and tautog (n=760 tags, 171 recaptures) (Table 3).
The top tagged species in 2016 was speckled trout, which has led in tagging effort since 2010 (except 2012, when red drum led as top tagged species). Species that had lower tagging numbers in 2016 included black drum (n=96 tags, 7 recaptures), flounder (n=1,213 tags, n=122 recaptures), sheepshead (n=20 tags, 0 recaptures); spadefish (n=131 tags, 7 recaptures); and triggerfish (n=22 tags, 6 recaptures; Table 3).

VGFTP data provided fish movement and site-fidelity patterns of fish captured and released in Chesapeake Bay and Atlantic coastal waters. These 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. The VGFTP continues to serve as an exceptional source of recreational fisheries data. The fact that the VGFTP offers unique data on recreationally-important finfish was just one reason why it was awarded certification by the Atlantic States Marine Fisheries Commission (ASMFC) in 2013. The VGFTP is one of only a handful of programs currently certified by the Interstate Tagging Committee (ITC). The program was commended for the training provided to taggers and the commitment of program personnel and anglers to the program. Evaluators also recognized the VGFTP's role in improving communication between fishery scientists and managers and the recreational fishing community while obtaining quality tagging data.

Proposed 2018 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 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.

Though our best efforts have been made for the 2018 budget projections, the attached budget is being prepared several months in advance. Therefore, minor adjustments may be necessary to reflect the changes in equipment costs, state funding, etc. and tagging effort related to overall abundance of fishes. The ratio of tag types has been adjusted to provide emphasis on the most prevalent tag type and to keep overall equipment costs lower. 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 2017 and 2018 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 2015 was completed and submitted to the Recreational Fishing Advisory Board and VMRC staff in May 2016. Limited hard copies are available of the report, though online access is encouraged to reduce printing and paper wastage. Annual reports through 2015 are available on the VIMS VGFTP website: www.vims.edu/vgftp/ ; future reports will be posted to the same location.

Figure 1. VGFTP Tagging Equipment

Tagging Gun and T-Bar Tags (top photo); Stainless Steel Dart Tag and
Applicator (bottom photo)
(Note: coin for scale – 0.75 inches diameter)
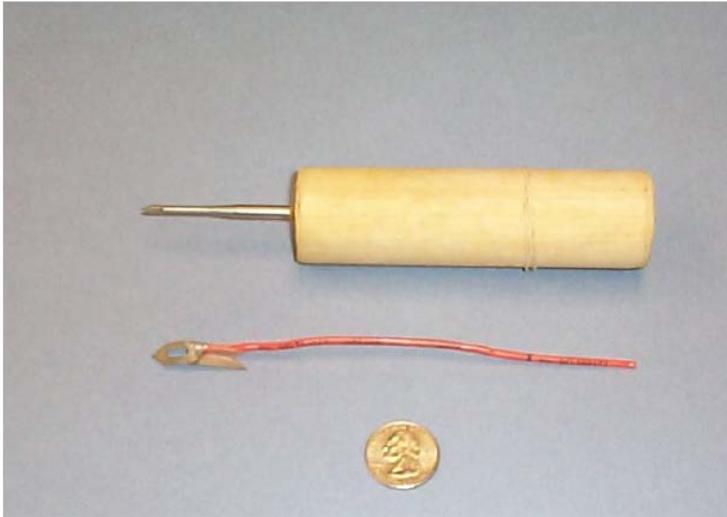
Table 1. VGFTP Top Taggers, 2016
These anglers tagged ≥25 fish in 2016.

First name	Last name	Black Drum	Black Sea Bass	Cobia	Flounder	Red Drum	Sheepshead	Spadefish	Speckled Trout	Tautog	Triggerfish	Total
ED	SHEPHERD	10	2492	8	532	436	0	0	1900	13	0	5391
SHELDON	AREY	0	0	0	13	59	0	0	1817	0	0	1889
SCOTT	VINSON	4	24	2	253	132	0	2	1357	1	0	1775
ROB	COLLINS	3	117	0	38	15	4	0	110	304	13	604
CARL	STOVER	2	26	35	26	72	0	1	268	2	0	432
JIM	ROBINSON	2	12	0	7	61	0	0	273	0	0	355
THOMAS & TREVOR	EMBRY	1	0	0	23	83	0	0	195	0	0	302
BARRY	DAVIS	0	1	0	28	7	0	0	244	0	0	280
DONNIE	SMITH	0	0	0	0	5	0	0	254	0	0	259
CONNLY	BASS	0	0	0	0	19	0	0	237	0	0	256
JAY	DUELL	22	5	1	93	28	0	0	107	0	0	256
JIM	DUELL	13	2	2	57	84	1	0	66	4	0	229
DOUG	PURCELL	7	0	0	0	125	0	0	71	0	0	203
GEORGE	WOJCIK	0	0	0	3	40	0	0	156	0	0	199
GERALD	HEAD	0	0	0	3	31	0	0	143	0	0	177
BRYAN	HERRING	3	9	3	23	62	0	0	65	2	0	167
JORJ	HEAD	0	0	163	0	0	0	0	0	0	0	163
WALTER	EHMANN	0	53	0	1	22	0	23	48	0	0	147
BILL	KNAPP	1	12	7	1	22	4	4	46	46	2	145
HUGH	GREEN	0	0	0	4	30	0	0	110	0	0	144
BRANDON	POULTER	0	0	0	8	31	0	0	82	0	0	121
DANIEL	SALVITTI	0	0	0	6	1	0	0	112	0	0	119
JEFF	HOTTENSTEIN	0	0	0	7	13	0	36	54	0	0	110
SUSAN	HARRELL	0	77	0	1	0	0	0	16	0	0	94
WALLY	VEAL	1	4	19	1	20	0	2	0	46	0	93
WES	BLOW	3	14	15	0	14	0	0	0	44	1	91
AL	BUNNELL	12	0	0	0	47	0	0	26	0	0	85
CHRIS	OBRIEN	0	0	65	4	3	0	0	0	13	0	85
TRACY	BOYD	1	0	0	1	46	0	0	36	0	0	84

Table 1. VGFTP, Top Taggers *continued*

First name	Last name	Black Drum	Black Sea Bass	Cobia	Flounder	Red Drum	Sheepshead	Spadefish	Speckled Trout	Tautog	Triggerfish	Total
JOE	BESSLER	0	0	0	0	4	0	0	80	0	0	84
BRIAN	WATKINS	0	0	38	0	6	0	0	39	0	0	83
MARVIN	HARDISTY	0	0	0	0	32	0	0	50	0	0	82
DAVID	GRIFFITH	0	0	3	1	59	0	0	16	0	0	79
WILL	BRANSOM	0	10	0	1	3	0	0	61	0	0	75
DANNY	TAYLOR	0	0	2	16	0	0	0	0	53	0	71
DAVID	BARNHART	0	0	0	0	1	0	0	23	46	0	70
RICHARD	FIERROS	0	9	0	3	17	0	0	36	1	0	66
JOHN	KNIGHT	0	0	0	0	0	0	37	0	23	6	66
DAVID	COHN	4	1	1	0	9	0	0	13	33	0	61
MIKE	LINTZENICH	0	0	12	0	11	0	7	0	25	0	55
SUSANNA	MUSICK	0	43	0	6	1	0	0	5	0	0	55
SCOTT	GRAVES	0	0	0	1	40	0	0	11	0	0	52
CHARLIE	BRYANT	0	0	0	0	0	0	0	50	0	0	50
JOE	HUDGINS	0	0	0	0	0	11	11	0	23	0	45
ERIC	WYNINGS	0	0	0	2	7	0	0	35	0	0	44
SUSAN	TURNAGE	0	2	0	20	0	0	0	20	0	0	42
ALAN	MOE	0	0	0	2	8	0	0	25	0	0	35
RYAN	SMITH	0	5	24	0	3	0	0	0	0	0	32
KEN	NEILL	0	0	0	0	0	0	0	0	29	0	29
BEN	HOOVER	0	0	0	0	0	0	0	28	0	0	28
CORY	ROUTH	0	0	0	0	27	0	0	1	0	0	28
RENSHAW	FORTIER	0	0	0	0	0	0	0	25	0	0	25
KIMBERLY	MORRIS	0	0	5	5	15	0	0	0	0	0	25
DON	MILLER	0	0	0	0	0	0	0	25	0	0	25
CARLIN	THOMAS	0	0	25	0	0	0	0	0	0	0	25

Table 2. VGFTP, Top Recapture Taggers
These anglers had ≥5 recaptures in 2016.

First name	Last name	Black Drum	Black Sea Bass	Cobia	Flounder	Red Drum	Sheepshead	Spadefish	Speckled Trout	Tautog	Triggerfish	Total
ED	SHEPHERD	2	1082	0	66	27	0	0	13	3	0	1193
ROB	COLLINS	0	9	0	1	0	0	0	0	60	0	70
SCOTT	VINSON	2	8	0	26	6	0	0	5	0	0	47
KEN	NEILL	0	0	1	0	0	0	0	0	39	0	40
BRYAN	HERRING	0	10	0	6	6	0	0	0	0	0	22
CARL	STOVER	0	1	9	1	3	0	0	1	1	0	16
SHELDON	AREY	0	0	0	1	2	0	0	13	0	0	16
WES	BLOW	0	0	7	0	0	0	0	0	7	0	14
WALLY	VEAL	0	0	1	0	0	0	0	0	13	0	14
JIM	DUELL	0	0	0	3	6	0	0	4	0	0	13
JORJ	HEAD	0	0	12	0	0	0	0	0	0	0	12
BILL	KNAPP	0	0	1	1	1	0	1	0	8	0	12
JIM	ROBINSON	0	0	0	0	8	0	0	1	1	0	10
JOHN	KNIGHT	0	0	0	0	0	0	2	0	1	6	9
DOUG	PURCELL	1	0	0	0	7	0	0	0	0	0	8
ANDY	MARTEL	0	0	5	0	0	0	0	0	3	0	8
JOHN	SAWYER	0	0	8	0	0	0	0	0	0	0	8
THOMAS & TREVOR	EMBRY	0	0	0	4	2	0	0	1	0	0	7
CONNLY	BASS	0	1	0	0	2	0	0	4	0	0	7
DAVID	COHN	0	0	0	0	0	0	0	0	7	0	7
SCOTT	GRAVES	0	0	0	0	6	0	0	1	0	0	7
BRANDON	BARTLETT	0	0	2	0	0	0	0	0	5	0	7
GEORGE	WOJCIK	0	0	0	0	5	0	0	2	0	0	7
JAY	DUELL	0	1	0	3	0	0	0	2	0	0	6
RYAN	SMITH	0	0	5	1	0	0	0	0	0	0	6
BARRY	DAVIS	0	0	0	5	0	0	0	1	0	0	6
CHRIS	OBRIEN	0	0	5	0	0	0	0	0	0	0	5
SUSAN	HARRELL	0	5	0	0	0	0	0	0	0	0	5
WALTER	EHMANN	0	1	0	0	3	0	1	0	0	0	5
MIKE	PERRON	0	0	0	0	0	0	0	0	5	0	5

Table 3. VGFTP Cumulative Numbers of Tags and Recaptures, 1995-2016. (Smaller number = # recaptures/larger number = # tags.)

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
2016	7	96	1,127	2,949	67	471	122	1,213	97	1,802	0	20	7	131	56	8,434	171	760	6	22	1,660	15,898
2015	7	115	1,080	2,150	70	361	198	1,364	23	283	0	37	8	229	75	7,548	84	676	7	50	1,552	12,813
2014	6	133	1,171	2,673	19	321	273	1,640	498	3,028	1	18	33	287	111	5,666	88	536	4	53	2,204	14,355
2013	3	203	608	1,884	16	224	128	904	868	5,945	0	28	12	108	273	6,535	125	1,066	2	24	2,035	16,921
2012	14	146	188	1,382	12	457	103	1,779	1,619	18,457	0	33	37	505	289	7,937	100	1,056	17	89	2,379	31,841
2011	10	214	482	1,590	8	158	200	2,693	282	1,231	0	18	2	28	889	12,740	79	701	3	13	1,955	19,386
2010	2	87	374	1,003	15	108	464	5,259	294	1,890	0	21	12	87	178	7,293	78	683	17	95	1,434	16,526
2009	5	172	1,012	3,274	8	36	1,265	9,348	544	3,133	8	225	20	391	99	3,204	110	541	46	176	3,117	20,500
2008	6	192	332	2,688	8	66	866	7,896	509	4,925	2	40	41	300	215	3,520	145	746	76	212	2,200	20,585
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	19,279
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	1,888	16,624
2005	4	205	107	686	4	98	621	6,123	42	794	3	185	21	173	29	1,149	133	822	4	23	968	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	1,007	12,193
2003	5	176	88	922	11	14	397	3,704	339	2,270	0	6	26	236	8	361	59	497	12	31	945	8,217
2002	15	188	231	1,732	15	63	317	3,566	193	2,758	1	10	55	470	23	1,249	129	653	23	56	1,002	10,745
2001	4	395	280	1,913	19	87	636	6,880	27	295	1	7	49	553	13	486	149	951	2	14	1,180	11,581
2000	5	109	294	2,008	10	65	161	2,603	173	1,124	1	12	60	523	11	362	156	713	0	0	871	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	943	6,042
1998	8	196	455	2,655	13	73	3	28	92	551	0	0	38	476	29	495	226	1,347	0	0	864	5,821
1997	2	72	48	592	9	108	2	38	44	438	0	0	36	547	12	440	77	914	0	0	230	3,149
1996	3	85	0	0	9	75	0	6	4	92	0	0	8	189	4	409	74	543	0	0	102	1,399
1995	37	200	0	0	2	50	0	3	2	66	0	0	25	193	14	601	30	260	0	0	110	1,373
Total Recaps /Tags	219	4,140	8,883	36,396	375	3,336	8,261	77,170	6,680	58,174	85	1,339	659	6,612	2,481	74,821	3,035	19,645	339	1,392	31,017	283,025
Overall Recap. Rate	5.29%		24.41%		11.24%		10.70%		11.48%		6.35%		9.97%		3.32%		15.45%		24.35%		10.96%	

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.

BUDGET CATEGORY				VMRC		MATCH		TOTAL
I. Salaries			Man Months					
a. Marine Recreation Specialist - S. Mus			1.55	$ 9,060	$	8,780	$	17,840
$ 70,140	Per Year		1.502					
$ 5,845	Per Month							
b. Data Technician - TBN			1.22	$ 4,226	$	-	$	4,226
$ 41,587	Per Year							
$ 3,466	Per Month							
		Subtotal		$ 13,286	$	8,780	$	22,066
II. Fringe Benefits		Rate:	40.00%	$ 5,314	$	3,512	$	8,827
		Subtotal		$ 5,314	$	3,512	$	8,827
	Total Salaries and Fringe Benefits			$ 18,601	$	12,292	$	30,893
III. Communications				$ 1,000	$	-	$	1,000
(Annual Report, Website/Recapture Updates,								
Promotional Publications, Mobile communications)								
IV. Travel				$ 2,778	$	-	$	2,778
(Local travel for field work, Tagging work								
group meetings, presentations at scientific								
meetings and association clubs.)								
V. Supplies				$ 20,464	$	-	$	20,464
(Tagging/fishing supplies)								
VI. Total Direct Costs				$ 42,843	$	12,292	$	55,135
VII. Indirect Costs - 25% VMRC				$ 10,711	$	-	$	10,711
Indirect Costs - 45.7% on Match				$ -	$	5,618	$	5,618
Indirect Costs - 20.7% from Direct				$ -	$	8,868	$	8,868
VIII. TOTAL PROJECT COSTS				$ 53,553	$	26,778	$	80,332
		50% Required Match			$	26,777		

Virginia Game Fish Tagging Program
Budget – 2017
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 requested an additional $1,680 over the 2011 budget for 2014 (no increases were requested in 2012, 2013, 2014, 2015 or 2016). We expect increases for 2017 (such as UPS) but are not requesting any additional funding for 2017 since the increases are expected to be minor and can be absorbed within the existing budget. Any unused portion of our budget is administratively returned to the fund. 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	600
Total	**15,738**

Postage and Shipping

U. S. Postage	1560
UPS Shipping	9860
Total	**11,420**

Supplies (Paper, Envelopes, Mailers, Tape, Bubble Wrap etc.) 1060
Travel 1200

Total **2260**

Grand Total **29,418**