



**STATE OF CONNECTICUT
DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION**

**Federal Aid in Sport Fish Restoration
F-64-E Application for Federal Assistance
Connecticut Aquatic Resources Education
January 1, 2019 – December 31, 2023**



**Bureau of Natural Resources
Fisheries Division
79 Elm Street,
Hartford, CT 06106-5127**



Table of Contents

	<u>Page</u>
Project Statement	1
Location.....	1
Key Personnel	1
Estimated Costs.....	1
Background	2
Need	4
Approach.....	5
Objectives of CARE-Instructor and Student Contact	7
Expected Results and Benefits of CARE-Instructor and Student Contact.....	8
Job Descriptions	
Job 1: Student Activities.....	10
Job 2: Administration	16
Literature Review	18
Appendix A	20
Appendix B	21
Appendix C	22
Appendix D.....	24

Cover photo: Fishing success, a key in “hooking” a child to want to fish again, is wonderfully high at Forster Pond located at the CARE Center in Killingworth, CT. Sixth grade students are shown here celebrating a quality largemouth bass catch during a field trip to the CARE Center on Forster Pond. *Photo by Justin Wiggins.*

Project Statement

State: Connecticut

Project Period: January 1, 2019 to December 31, 2023

Project Title: Connecticut Aquatic Resources Education

Project Number: F-64-E

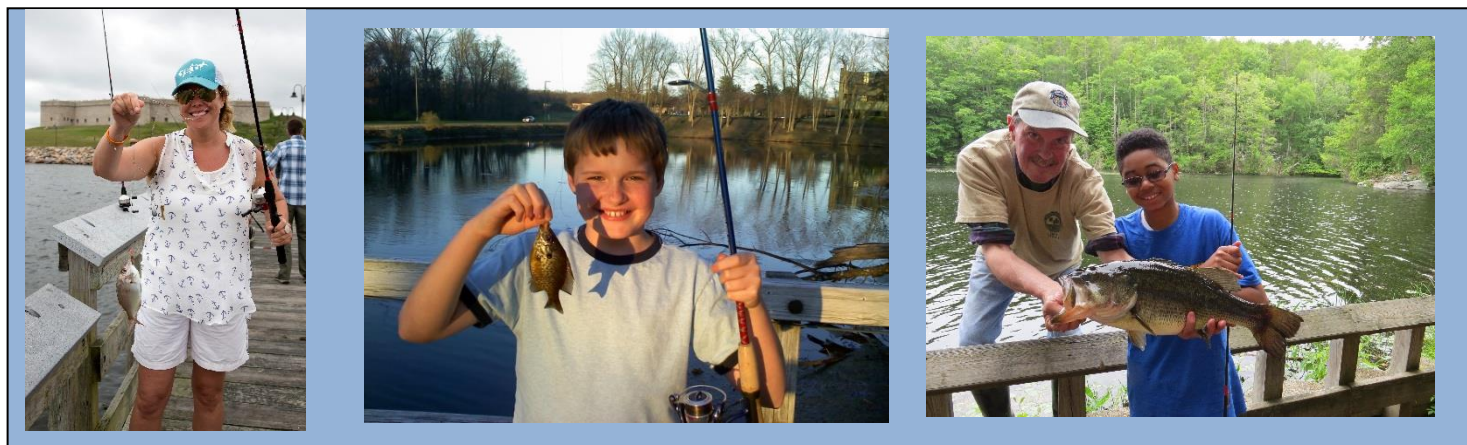
Location: Statewide

Key Personnel:

Beauchene, Mike	Supervising Fisheries Biologist, Project Leader
Bourret, Thomas	Fisheries Biologist 2
Wiggins, Justin	Environmental Analyst 2
Vacant	Seasonal Resource Assistants- 4
Various	Volunteer Instructors-200

Estimated Costs:

Year	Total Project Cost	Federal Share	State Share
2019	\$488,712	\$366,534	\$122,178
2020	\$503,374	\$377,530	\$125,843
2021	\$518,475	\$388,856	\$129,619
2022	\$534,029	\$400,522	\$133,507
2023	\$550,050	\$412,537	\$137,512
Total	\$2,594,640	\$1,945,980	\$648,660



Background:

The Connecticut Aquatic Resources Education ([CARE](#)) program, created to provide instruction in fishing techniques pursuant to Section [26-31a](#) of the Connecticut General Statutes in 1986 (Appendix A), has been a successful element of the Connecticut Department of Energy and Environmental Protection's ([DEEP](#)) Fisheries Division ([FD](#)) for the past 32 years. CARE's full-time staff lead hundreds of certified instructors, using fish and fishing as a medium to create the next generation of fishing participants and environmental stewards. CARE instruction and activities are designed to provide aquatic education opportunities, to increase the public's interest, understanding, and stewardship of aquatic resources, and to inspire families to adopt fishing as an activity of choice. The angling public, as a group, is among the most dedicated stewards of the environment, and this is critical to support DEEP's mission of "conserving, protecting and improving the natural resources and environment of the state."

Since 1986, through the dedication of over 2,100 volunteer instructors, CARE has had contact with over 212,000 students. The value of these volunteer instructor hours is roughly equivalent to \$4.2 million dollars.

Since the inception of CARE, societal needs have changed and will continue to change. An aging angling community, faster-paced society and busier lives may result in less fishing (Responsive Management and Southwick Associates 2012). A National Academy of Sciences study also reported that TV, internet and video games were big reasons behind a drop in youth fishing (Wegman 2008). Without a vested interest in fishing, it is harder to get people to connect to fish and water issues, let alone conservation. This makes the stewardship work of DEEP staff much more difficult.

Fish and fishing have always proven to be great attractors for students and volunteers alike.



The core of the CARE program is to provide the public a quality fishing experience while creating a connection to our natural resources. These 6th grade students enjoyed a successful day of fishing on Forster Pond at the CARE Center.

Specifically the CARE program strives to:

- increase public awareness of aquatic resources
- help introduce students to fishing
- promote environmental stewardship
- encourage responsible behavior among citizens by fostering a respect for and knowledge of our State's natural resources.
- Continually adapt our message to meet changing family and societal needs

They are also an ideal medium to communicate the importance of, and human impact upon water quality, aquatic ecology, and fish habitat (Etgen 2007, Scott 2006, Jones 2007). Based upon surveys of our volunteer Instructors and meetings with state and federal administrators, we have established program objectives, activities and priorities. The outcome is a clear need to teach citizens about fisheries, fishing and aquatic ecology while concurrently developing new fishing participants and active stewards of the State's natural resources. We accomplish this by having compact course schedules, continually improving course content, improving awareness of CARE courses/events, targeting instructor recruitment in specific areas (including urban centers), and expanding curriculum to fill "next level" skill and knowledge based courses (i.e. Introduction to Trout, Bass, Fly Fishing). Our goal is to provide continual support via additional points of contact to foster their newly growing interest in fishing.

Independent external and internal survey results of CARE graduates indicate they are confident beginner-level anglers, are satisfied with class content, display high levels of environmental knowledge, take fishing trips on their own, intend to make fishing an activity of choice, and actually purchase fishing tackle and fishing licenses (Responsive Management and National Wild Turkey Federation 2011, CT DEEP 2015).

Experiencing fishing with family and friends, to relax, to be outdoors participating in a sport, and to catch a fish continue to be most important and beneficial reasons why people start to fish and continue to fish (Byrne 2016). The importance and value of environmental education and outdoor experiences have taken center stage over the last decade. Richard Louve's book, *Last Child in the Woods*, focused attention on "nature-deficit disorder" in 2006. Louve supports efforts to help an entire generation that is becoming out of touch with the workings of the natural world. In the same year, Former DEEP Commissioner Gina McCarthy started a department-wide initiative named [No Child Left Inside](#)® (NCLI) to provide recreation, teach environmental competency and combat youth obesity. The NCLI program has become a successful partner of CARE in attracting families that have a desire to spend time outdoors while participating in department lead outdoor activities, such as fishing.



Fishing in our state has never been as good as it is today. The number of people participating in fishing nationally is beginning to increase ([Recreational Boating and Fishing Foundation 2018](#)). While it may take many different types of activities, programs, and strategies to regain historic fishing participant numbers, we are confident the positive effects of CARE are effectively working towards the FD priority of: **Recruiting** new anglers, **Reactivating** lapsed anglers, and **Retaining** of existing anglers (**R3**) (CT DEEP 2017, [CT DEEP 2016](#)).

Need:

Demand for CARE classes remains strong from the general public, municipal recreation departments, by camps serving youth and by groups providing activities for families. Newspaper, television, radio, and social media coverage of CARE activities has improved the public image of the DEEP, demonstrating how these events met and exceeded the expectations of participants. Top administrators within the DEEP and FD demonstrate support for CARE efforts by personally attending events. As such, the CARE program is a critical component supporting DEEP's mission of "conserving, protecting and improving the natural resources and environment of the state."



DEEP Seasonal Interpretive Guides travel to summer day camps around the State teaching interactive lessons on water, fish and fishing while fostering student's appreciation for their local natural resources.

CARE efforts over the next 5 years will focus on:

- Continuing to acquire and train new instructors who are representative of Connecticut's population
- Continuing to offer as many introductory/beginner level classes as possible
- Implementing additional classes, fishing trips, or events to graduates of our introductory classes in order to provide support for continued fishing participation
- Diversifying class formats by inviting specific target audiences (mom and me, women only, etc.)
- Increasing fishing participation in CT by encouraging and supporting families to make fishing an activity of choice
- Continuing to support the inclusion of fishing into school curricula
- Increasing the ability to collect and manage participant contact information
- Assessing and evaluating program activities to ensure participation outcomes (i.e. participant goes fishing, purchases a fishing license, purchases fishing gear) are effective in supporting the FD priority of **R3: Recruiting** new anglers, **Retaining** current anglers, and **Reactivating** lapsed anglers

For each focus point listed above, CARE has mapped our five student activities using the [Outdoor Recreation Adoption Model](#) (ORAM) (Figure 1) ([AREA 2016](#)). First, we must recruit *students* to whom we pass along a basic level of *awareness* and *interest* of water, fish and fishing. The next step is to make them *participants*, by offering a "trial" through the excitement of an actual fishing trip. Our structured follow-up "specialized fishing courses" and "second

cast fishing trips” continues their fishing progression, with support, while also providing additional “points of contact” for each participant. Success here creates *anglers* who understand safety, regulations and techniques. As they begin to feel a connection to the resources they derive enjoyment from, they are more apt to *demonstrate* outdoor ethics and *practice* conservation. Next comes having individuals and families *adopt* fishing as a recreation activity of choice. Finally, by taking *action* to help the environment, some citizens get to the point of assisting in the *stewardship* of our resources. This might be as simple as supporting DEEP conservation work by buying a fishing license or adding to the Sportfish Restoration Fund through tackle purchases. Each step of this process yields benefits to the environment, the individuals and the Department.

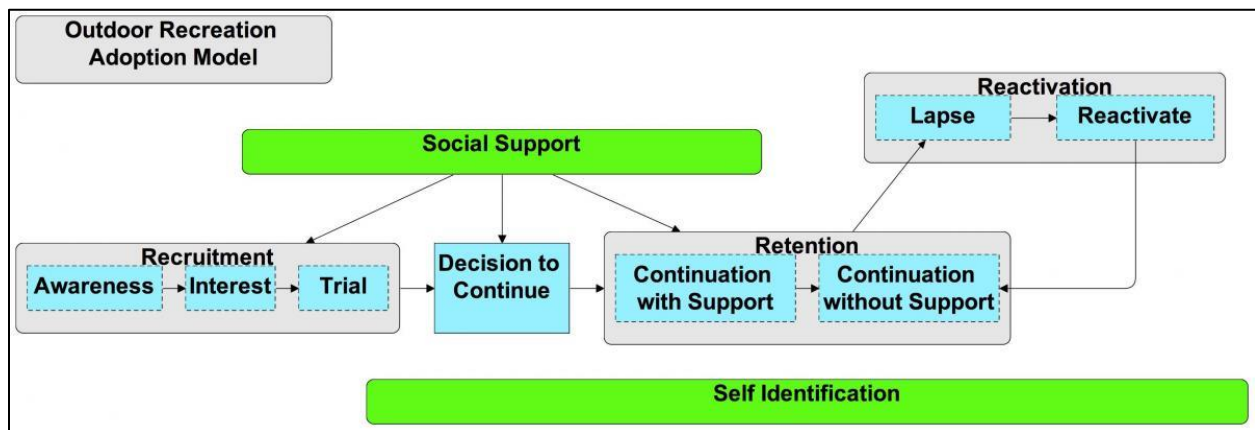


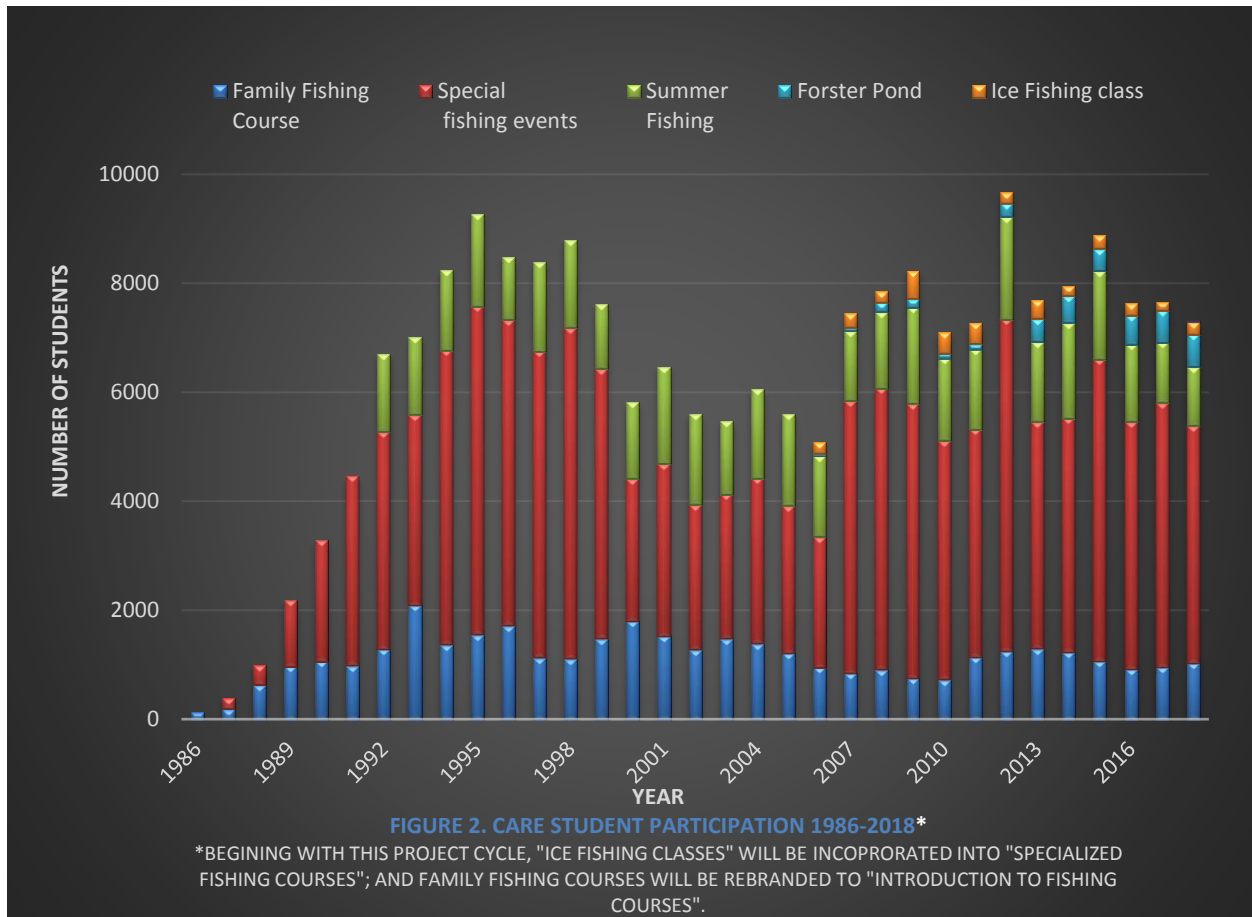
Figure 1. The Outdoor Recreation Adoption Model was introduced to state agencies as a means to map and assess angler Recruitment, Retention, and Reactivation (R3) efforts (AREA 2016).

The connections between each of the steps listed above are tenuous (Knuth 2007). The situation is very much like the proverbial *food chain*, used to illustrate energy flow through an ecosystem. Only a percentage will move through the process to each subsequent level. Success will also require large student numbers due to simple attrition throughout the process. We understand these facts and accept them as parameters in the plan we’ve designed and presented in this document.

Approach:

CARE implements techniques that are standard methods common in the discipline. They are based on human dimensions research and incorporate *Best Practices* for Aquatic Resources Education (Seng and Rushton, 2003). CARE has been, and will continue to be persistent, adaptive, and flexible as we promote aquatic resources education over the next five years. CARE attempts to increase participation by accommodating our constituent’s busy lifestyle and need for convenient learning opportunities (Responsive Management and Southwick Associates 2012). Instead of trying to control the societal variables, we mitigate their effects by

continually adapting to the changing conditions and as such have been able to maintain consistent participation over the previous 5-year reporting cycle (Figure 2).



All CARE program staff belong to the [Aquatic Resources Education Association](#) (AREA). This provides instant, electronic access to hundreds of AREA professionals across the nation for advice, consultation, research and information. Participation in the bi-annual conference facilitates face-to-face interaction with peers, enabling us to gain specific insights into the latest environmental education methods, which will help us to continually modify our approach.

AREA and the [Recreational Boating and Fishing Foundation](#) produced the “Recommendations and Strategic Tools for Effective Angler Recruitment, Retention, and Reactivation (R3) Efforts” ([AREA 2016](#)) report encouraging State Agencies to asses current R3 efforts against the ORAM. CARE mapped all student activities and identified gaps and potential for growth in our R3 efforts using the ORAM model (Appendix B). Specifically, during this project period CARE will reallocate effort to fill identified gaps of “Retention” of fishing participants. Designing and incorporating “next steps” into CARE student activities will direct participants toward additional learning opportunities, assure multiple points of contact, and keep interest and fishing relevancy high ([Byrne 2016](#)).

CARE will begin providing opportunities to past participants by:

- Integrating a new student activity of “Specialized Fishing Courses” designed to further the knowledge and skills of new anglers with structured support,
- Collecting participant contact information in an effort to:
 - Notify participants and market new CARE opportunities to continue fishing with support,
 - Assess and evaluate outcomes of participation in CARE classes,
 - Inform participants of relevant news and updates about fishing in Connecticut,
- Invite CARE class graduates to “Second Cast Fishing Trips”, specifically to continue their fishing progression with instructor support.

Objectives of CARE-Instructor and Student Contact:

- After participating in the CARE New Instructor Training, volunteers will be able to
 - Demonstrate knowledge of all parts of the CARE curriculum,
 - Recruit other team members,
 - Organize fishing classes and events,
 - Submit properly completed course documents.
- After attending an ***Introduction to Fishing course***, participants will
 - Demonstrate appropriate and safe fishing skills,
 - Utilize the Connecticut *Fishing Guide* to ensure legal and ethical angling,
 - Demonstrate proper fish handling, catch and release and/or harvest,
 - Describe four aquatic ecology concepts,
 - identify common sport fish of Connecticut,
 - the habitat needs of fish,
 - the predator-prey relationship,
 - invasive species.
 - Be aware of future “Specialized Fishing Courses” and follow-up fishing activities.
- After participating in any CARE student activity or event, participants will be able to do one or more of the following, based on which parts of the CARE curriculum are covered:
 - demonstrate safe angling skills,
 - catch a fish on their own,
 - assemble their own fishing equipment and use it properly,
 - list the habitat needs of fish,
 - identify 6 families of fish commonly caught in Connecticut,
 - name one aquatic invasive species and describe its effect on Connecticut waters/fisheries,
 - define the term “selective harvest”,
 - demonstrate catch and release or proper care of the catch,
 - identify a good place to go fishing with their family near their home,
 - describe two practices of an ethical angler,

- be aware of web based resources available on DEEP FD webpage to aid in seeking local fishing destinations and fish species information,
 - list three aspects of water quality and explain why they are important to fish,
 - identify three sources of pollution and give an example of how to reduce it.
- Through targeted outreach, we will improve communications with anglers and the general public about fishing opportunities and the agency's work, to reduce barriers to participation in fishing, and to promote safe, ethical angling.

Expected Results and Benefits of CARE instructor and Student Contact:

The State of Connecticut, through DEEP and FD is charged with this mission: *To Conserve and Enhance Fish Populations and to Enhance Recreational Fishing Opportunities*. CARE contributes to this mission in the following ways:

- 1.) Direct creation of environmental stewards by empowering volunteers to share environmental knowledge, skills and experiences with the public for the enhancement of aquatic ecosystems;
- 2.) Providing the most comprehensive and practical assemblage of information on water, fish and fishing that most students will receive in their K-12 education;
- 3.) Contributing to the students' understanding of people's effect on the environment;
- 4.) Assisting school teachers in meeting student learning benchmarks in science, art, physical education and communication skills;
- 5.) Helping families select angling as a lifelong recreation choice;
- 6.) Production of accurate records and use statistics for federal, state and non-governmental partners to use in their reporting;
- 7.) Fulfilling requirements set forth in Connecticut General Statute [26-31a](#);
- 8.) Contributing to students' knowledge of Community Fishing areas in/around their home;
- 9.) Contributing to increased participation in licensed angling statewide;
- 10.) Promoting safe, responsible (ethical) angling behavior;
- 11.) Improving public health and reducing ingestion of biomagnified contaminants by diverting harvest from predators to panfish, stocked trout and channel catfish;

12.) Enabling students to assist in sportfish conservation through both catch-and-release and selective harvest, as appropriate;

13.) Providing positive and life-long recreation alternatives to urban populations and youth-at-risk;

14.) Providing educational opportunities for organizations helping citizens with special needs;

15) Providing citizens with awareness and timely information on fisheries management projects, new and expanding angling opportunities, safety concerns, changing regulations, and important environmental issues;

16) Alerting citizens to opportunities available for them to observe, comment on, or participate in fisheries management activities led by FD staff.



A very rewarding sight is witnessing the pride exhibited after landing the “first fish”. We at CARE are extremely fortunate to be a part of this milestone, time and time again. CARE fishing trips are scheduled at waters that have high catch rates, almost guaranteeing that “first fish” smile.

Project Jobs:

CARE has two project jobs: Student Activities and Administration.

Job 1 - Student activities remains the top CARE priority as we continue the program's history of developing an interested, knowledgeable, and skilled fishing constituency. Student activities are the primary function of the CARE program as they have the greatest ability to create

- 1) Basic fishing *participants*;
- 2) More knowledgeable *anglers*,
- 3) Active *stewards* of aquatic resources.

The five CARE student activities are: Introduction to Fishing Courses, Specialized Fishing Courses, Forster Pond Courses, Summer Fishing Classes, and Special Fishing Events (Table 1). The goal of each type of student activity is to provide a broad complement of fishing related content, to have as many students as possible participate in a fishing trip, and develop a support network by involving family members. Each type of student activity differs with the content of instruction, interaction time (*IT*), and the instruction location. The variety of content and delivery of the student activities enables the CARE program to engage participants and have several levels of outcome, ranging from creating a participant who simply gains basic fishing skills and awareness, to development of a steward who cares for our aquatic resources.



The CARE program introduces students to the basics of fishing and integrates fishing trip opportunities as frequently as possible. Many quickly master the techniques and are eager to begin the quest for bigger and different types of fish. They are “hooked”.



Time contributed by Certified Instructors, Chief Instructors and teaching team members will be used as match for Wallop-Breaux funding, at the current Fishery Biologist 1 (Certified & Chief) and Fishery Technician (Teaching Team Members) rates.



CARE Instructors take great pride in teaching classes, working large scale fishing events, and supporting the FD mission. Each year the value of their volunteered hours meets or exceeds the required state match.



Table 1. Topics, Interaction Time (*IT*), and expected outcome for each of the five CARE student activities. The shaded portion of the circle represents the relative quantity of that topic covered for the respective student activity. For example, all “*Introduction to Fishing Courses*” cover “Fishing Tackle” in detail while only a small proportion of special fishing events cover that topic.

Topic	Student Activity				
	Introduction to Fishing Courses	Specialized Fishing Courses	Forster Pond Courses	Summer Fishing Classes	Special Fishing Events
Fishing Tackle					
Casting Practice					
Knot Tying					
Bait/Lures					
Regulations & Safety					
Fish Identification					
Care of Catch-Fish Harvest, Consumption, Catch & Release					
Fish Biology & Management					
Habitat & Water Quality					
Fishing Trip					
Family Involvement					
Interaction Time (hours/student)	6	4	12	2.5	1
Staff Time (%)					
Expected Outcome	Angler/Steward	Angler/Steward	Angler/Steward	Participant & Environmental Knowledge	Participant & Environmental Knowledge

Introduction to Fishing Courses are the premier activity of the CARE program. Our goal is to insert a broad complement of environmental and ecological information into an entertaining yet informative fishing package. Beginner anglers and families are the target audience, especially those with children age 9 and older. **Introduction to Fishing Courses** require partnerships with others, usually municipal recreation departments, libraries, and scouting organizations. They are the most labor-intensive product we offer, requiring attention of two permanent staff plus 200 volunteers. They employ a consistent package of classroom activities delivered by staff and volunteers, plus a volunteer Instructor lead fishing trip. The result is a consistent message taught over 5 hours of students interacting with Instructors (**IT** of 5 hours). It contains separate modules covering six (6) subject areas. Classes range from 15-35 participants.

Critical elements for developing lifelong anglers are social support, repeated opportunities, success at catching fish, and aesthetics of angling locations (Dann 2002, AREA 2016). **Introduction to Fishing Courses** support each of these and are the best option we offer to create participants while developing some into ethical, successful anglers. Chief Instructors use the following criteria in picking field trip sites: open shoreline, bathrooms, accessibility, likelihood for catching fish, and proximity to class location. The FD's [community fishing waters](#) and [trout parks](#) offer all these amenities and are often utilized as field trip sites. The FD plans to continue to expand the community waters fishing program will increase the likelihood of CARE students returning to these local sites, meeting our objectives of creating lifelong anglers and environmental stewards.



In an effort to offer a “next step” and provide continuation with support via additional points of contact with **Introduction to Fishing** participants, CARE staff will coordinate “Second Cast Fishing Trips” and “Specialized Fishing Courses.” “Second Cast Fishing Trips” will be offered at community waters and trout park locations around the state. These fishing events will only be open to past CARE participants and consist of a fishing trip with structured support from Instructors. Specialized fishing courses provide opportunity to diversify and advance fishing knowledge and skill.

SMART objectives¹ (Doran 1981) for Introduction to Fishing Courses is to exceed the five-year average of participation from our previous AFA project segment of 1,031 students per year

¹ SMART Objectives are Specific, Measurable, Achievable, Relevant, and Time bound and directly address a need or purpose. CARE uses SMART Objectives to provide qualitative evaluation of program goals and objectives.

and instructor-student *IT* of 5,380 hours per year.

Specialized Fishing Courses are designed to fill gaps in retention efforts identified in ORAM model. These classes will target *Introduction to Fishing Course* graduates and novice anglers that have some previous fishing experience that would like to continue to build upon their fishing knowledge and skills. These courses will focus on a specific topic and consist of a 2-hour instructional class and conclude with a fishing trip. Examples of **Specialized Fishing Course** topics include “Introduction to Ice Fishing”, “Introduction to Bass Fishing”, “Introduction to Trout Fishing”, “Introduction to Fly Fishing”, “Learn to Fish for Food: Catch it and Cook it”. These courses will rely on the knowledge and partnerships of Instructors as well as local fishing advocacy groups such as CT B.A.S.S. Nation and regional chapters of Trout Unlimited.



CARE ice fishing classes and events are a very popular winter activity. These “Specialized Fishing Courses” offer participants an opportunity to continue to build upon their fishing knowledge and develop new skills.

The SMART objective for Specialized Fishing Courses is for 50% of the students to have graduated from an *Introduction to Fishing Course*.

Forster Pond Courses use a specially designed curriculum taught collaboratively by classroom teachers, volunteers and permanent staff. Sixth graders are the target audience, along with their teachers, aides and parents. The course consists of two primary components; the first is instruction of several modules, including water quality, habitat, and fish identification facilitated by schoolteachers in their respective classrooms. The second is a field trip to our education center in Killingworth, where CARE staff teaches the angling module and casting technique. Immediately following the casting instruction, all students get to practice their new skills in our 33-acre warmwater impoundment. Catch rates, a key in “hooking” a child to want to fish again, are wonderfully high (>90%). Teachers and parent-chaperones are encouraged to buy fishing licenses and accompany their children, developing social support for students. Our intent is to create resource users (participants), with many progressing to the angler stage and a few to the steward level. Classes range from 15-30 participants and are a function of the available space within our CARE center.

In an effort to offer a “next step” and provide continuation with support via additional points of contact with **Forster Pond Course** participants, CARE staff will coordinate “Second Cast Fishing Trips” at a local community water in close proximity to students’ school. These fishing events will only be open to **Forster Pond Course** participants and their families, and consist of a fishing trip with structured support from Instructors.

After implementation of a successful pilot program in 2009, the Hamden school district requested expansion of the program to all 6th grade students by 2013. CARE would like to expand the model to additional school districts but are limited by staff time and facility capacities. To overcome these limitations would require:

- additional funding to hire full-time support,
- clearing and maintaining of additional shoreline fishing access points at our education center.

SMART objectives for Forster Pond Courses will be to exceed the five-year average of participation from our previous AFA project segment of 523 students per year and instructor-student *IT* of 5,181 hours per year.



Every 6th grade classroom from the Hamden public school system attends a day long field trip to the CARE Center at Forster Pond. The day begins with interactive lessons on fish identification and fishing skills, and culminates with a fishing trip on Forster Pond.

Summer Fishing classes are organized by one permanent staff member and taught by 4 seasonal staff. They run for an 8-week period each summer focused on day time summer-camp programs. Classes run about 2-3 hours and have 15-30 students. These classes use interactive games to teach aquatic ecology, fish identification, safety, pollution, knot-tying and casting. Classes conclude with a fishing experience. Improved environmental awareness and an introduction to fishing are the primary benefits. A limitation of this program is absence of family participation. CARE continues to investigate ways to include the families of students who participate in these programs. CARE will try to leverage the 2014 expansion of the FD Community Fishing Waters program to six new municipalities. We hope to get more adults involved by educating about the fishing opportunities located in close proximity to their neighborhoods.

SMART objectives for Summer Fishing classes will be to exceed the five-year average of participation from our previous AFA project segment of 1,399 students per year and instructor-student *IT* of 2,990 hours per year.

Special fishing events encompass a broad array of activities and are flexible enough to allow us to serve citizens requiring higher levels of supervision, requiring special assistance, or involve large numbers of the public. They are designed to increase student awareness, fishing skills, and provide a much-needed positive first fishing experience that is critical to getting the students to participate in fishing a second time. The number of attendees varies greatly, from 15 to 1,500. The majority of classes includes teaching fishing skills and is lead by volunteers. They are



usually single-meeting events. Examples include ice fishing derbies, “Second Cast Fishing Trips”, “fishing week” at summer camps, fishing events at FD Community Fishing sites, clinics held prior to town fishing derbies, *Take A Vet Fishing* classes, and various DEEP No Child Left Inside® outdoor events held at FD Trout Parks or Community Fishing Waters.

SMART objectives for special fishing events is to exceed the five-year average of participation from our previous AFA project segment of 4,720 students per year and instructor-student IT of 18,288 hours per year.

Job 2 –Administration is the second core function of the CARE program and greatly facilitates smooth operation. As 100% of State match is provided by volunteer hours, the recruitment, training, and support of a dedicated core of volunteers is critical. Common administrative duties are listed in Appendix C.

Objectives for administration include;

- Continue to modify curriculum and develop relevant and compelling aquatic resources education materials.
- Actively participate in the “Aquatic Resources Education Association”, a national group of professionals, and USFWS Region 5 Aquatic Educator meetings to ensure the most relevant and effective aquatic education strategies are implemented in Connecticut.
- Recruit, train, and certify 20 new instructors by conducting two instructor certification trainings per year, totaling 100 new instructors through each AFA project period.
- Retain and supervise ~200 qualified volunteer instructors annually.
- Conduct one in-service training for active certified volunteer instructors per year.

- Maintain frequent and timely communication with volunteers through CARE email listserv regarding upcoming class opportunities and FD updates.
- Continue to gather participant email addresses and baseline data. Produce quarterly (4 per year) electronic newsletters focused on fishing in CT and opportunities to further angling skills and send to CARE class participants.
- Establish partnerships with municipalities and non-governmental organizations to schedule and coordinate student activities.
- Coordinate Forster Pond Courses with teachers from 15-20 elementary school classrooms including a field trip to the CARE Center for each class.
- Purchase, distribute and maintain all education materials and field equipment needed for classes around the State .
- Supervise 4 seasonal Interpretive Guide employees plus summer interns.
- Assist in administration and increase relevancy of CARE on ***CT FISH AND WILDLIFE*** social media [Facebook page](#).
- Design and implement surveys to evaluate and measure participant outcomes after attending a CARE class.
- Recruit and retain participants in the [Youth Fishing Passport program](#) (Appendix D).

Literature Review

Aquatic Resources Education Association (AREA) and Recreational Boating and Fishing Foundation. 2016. *Recommendations and Strategic Tools for Effective Angler Recruitment, Retention, and Reactivation (R3) Efforts*.

Byrne, B. 2016. *Highlights of Angler Recruitment, Retention, and Reactivation (R3) Literature*.

CT DEEP. 2015. *Angling for the Future: A comparison of knowledge, skill, & participation before and after attending a CARE Family Fishing Course*.

CT DEEP. 2016. *Increasing Angler Participation in Connecticut: A Summary and Status Update*.

CT DEEP. 2017. *Casting to the Future. Connecticut's plan to increase the number of recreational anglers*.

Dann, S. 2002. Youth Recruitment into Fishing: The influence of familial, social and environmental factors and implications for education intervention strategies to develop aquatic stewardship. Doctoral dissertation. Michigan State University.

Doran, G. T. 1981. *There's a S.M.A.R.T. way to write management's goals and objectives*. *Management Review*. AMA FORUM. **70** (11): 35–36.

Etgen, C. 2007. Maryland's Aquatic Resources Education Program. Project Completion Report.

Jones, E. 2007. Aquatic Resource Education (Maine). Annual Performance Report.

Knuth, B., and W. Siemer, eds. 2007. *Aquatic Stewardship Education in Theory and Practice*. American Fisheries Society Symposium 55.

Louve, R. 2006. *Last Child in the Woods*. Algonquin Books of Chapel Hill.

Recreational Boating and Fishing Foundation. 2018. *Special Report on Hunting and Fishing*.

Responsive Management and The National Wild Turkey Federation. 2011. *Effectiveness of Hunting, Shooting, and Fishing Recruitment and Retention Programs: Final Report*

Responsive Management and Southwick Associates. 2012. *On the Fence About Fishing. A Study of Why Anglers Do and Don't Fish and What will Get them on the Water*. American Sportfishing Association publication

Scott, Mark. 2006. Vermont Aquatic Resource Education. Performance Report.

Seng, P., and S. Rushton. 2003. *Best Practices in Aquatic Resources Education*. Recreational Boating and Fishing Foundation.

Wegman, W. 2008. "Videophilia" Impacts fishing numbers. *Bass Times* magazine.

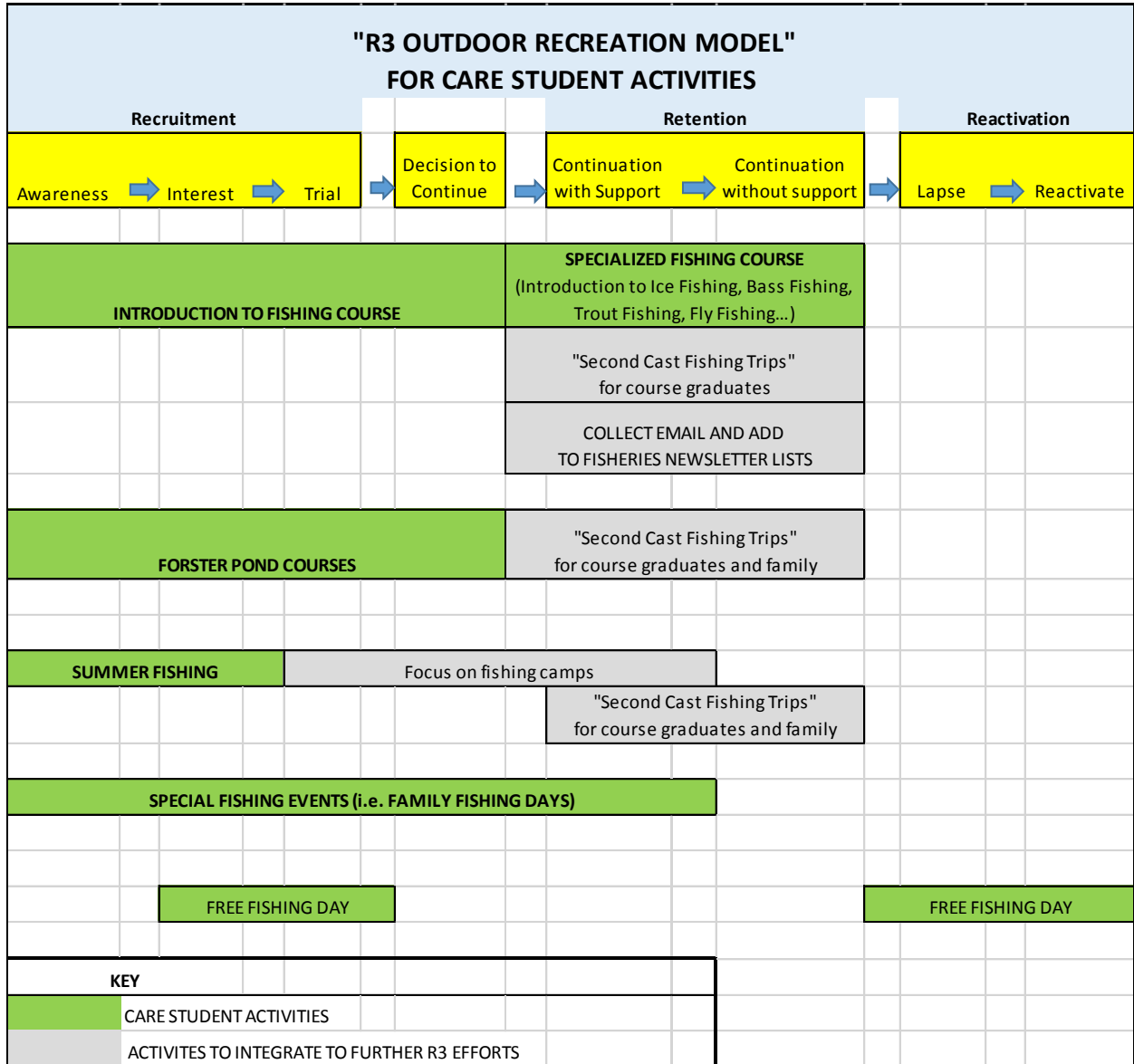
Appendix A

Connecticut General Statute 26-31a

Sec. 26-31a. Instruction in fishing techniques. (a) The Commissioner of Environmental Protection shall formulate a course of instruction in fishing techniques to be known as the fishing education and urban angling program. The commissioner shall designate one or more competent persons or organizations to give such instruction. Any person so designated shall give such instruction to any person requesting the same and shall upon successful completion thereof issue a certificate of completion to such person. No fee shall be charged for such instruction.

(b) All certified fishing instructors shall, while performing their duties under this section, be covered by liability and property damage insurance protection, which insurance shall be in an amount satisfactory to and negotiated by the Comptroller and the premium for such insurance shall be paid from the General Fund.

Appendix B



Appendix C

Common administrative responsibilities

- Recruit, hire and train seasonal employees and volunteer Instructors.
- Continually review and revise *Instructor Policy and Procedures Manual*; modify Instructor's notebook periodically to improve its utility.
- Design and revise data collection forms; train volunteer and paid staff to use them.
- Check all data collected and edit for accuracy. Oversee its entry into the computer database.
- Continually produce upcoming class lists, website class lists, Instructor Time & Activity Reports, student demographics reports and annual progress reports.
- Provide additional reports for: DEEP Affirmative Action staff, DEEP administrators, NGO's, other state agencies, the U. S. Fish and Wildlife Service and media contacts.
- Collaborate with technical support staff for ongoing modifications to computers and software; monitor progress.
- Perform telephone, email and written communication daily.
- Attend professional meetings, communicate with colleagues, present and publish results of CARE activities whenever possible.
- Operate, refine and improve a class-tracking system for equipment and information management.
- Conduct continual inventories of supplies; develop specifications; locate vendors and complete necessary requirements to secure needed materials.
- Continue to utilize UPS distribution system whenever possible to deliver and retrieve equipment used at events held across the State.
- Continually assess needs and effectiveness of activities through reports and comments from Instructors, municipal recreation departments, youth organizations and schools.
- Coordinate activities with other organizations to schedule and operate events.

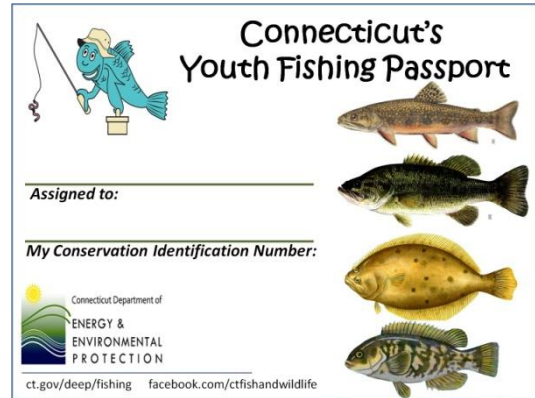
- Design and develop Instructor recognition and retention guidelines and activities.
- Work with professionals both within and outside the DEEP to develop promotional materials, alert the public to upcoming activities and secure contacts for marketing/advertising of CARE events.
- Continue to update email list, mailing list and Instructor info in CARE Instructor database to enable us to recruit volunteers when needed.
- Continue compliance with health and safety requirements at the CARE Center
- Attend health and safety training and certification classes as required by State and Federal guidelines.
- Create and submit project requests to maintain and improve CARE Center buildings and fishing access sites.
- Schedule, plan and conduct New Instructor Training and In-service Training opportunities for volunteers.
- Attend CARE courses across Connecticut to monitor and evaluate activities of Chief Instructors and Instructor teaching teams.

Appendix D

Youth Fishing Passport

WWW.CT.GOV/DEEP/FISHING/YFP

Beginning in December of 2011, the FD released the [Youth Fishing Passport Program](#) (YFP). The intent of the program is to provide a framework and structure to families so that they will choose fishing as an activity of choice. The framework has three key components. First are structured activities, second is a series of [incentives](#) offered by the fishing industry to youth passport holders, and finally support and encouragement of fishing experiences, including CARE student activities and No Child Left Inside® events.



The YFP program has two structured activities, the [fishing challenge](#) and fish [geo-catching](#). Both activities are similar in that they require the child to capture a specific list of common game species found in Connecticut. The two activities differ in that the fishing challenge allows a child to catch fish on the list regardless of location; geo-catching requires the child to catch a specific type of fish from a specific location. The combination of location and type of fish were matched to highlight FD management efforts at many of our state parks and facilities.

A unique aspect of the YFP is that the participant registers using the CT DEEP online sportsmen system, the same system adults use to purchase their sporting licenses. The benefit of registering for the YFP through this system is; the registrant is assigned a life-time conservation number (allows us to see if they continue to participate in the sport once into adulthood), introduces them to the process of supporting the sport by registering or purchasing a license, and it is on-line appealing to today's technologically savvy society. The YFP and CARE have excellent synergy, which will help to meet program goals and objectives.