



**A. NOAA Fisheries Cooperative Research Partners Program
Final Report Cover Sheet**

Report Title:
Tagging Cape's Cod: Summary of Northeast Regional Cod Tagging Program Level I Operations
for Inshore Waters off Cape Cod and Southern New England

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B. Abstract:

The Northeast Regional Cod Tagging Program (NERCTP) is a large-scale cooperative research project in which fishermen, scientists, and managers from the United States and Canada are working together to use mark-recapture tags to study movement, distribution and growth of Atlantic Cod (*Gadus morhua*), deliver social benefits in the form of working relationships between stakeholders, and establish a foundation for future collaborations. The Cape Cod Commercial Hook Fishermen's Association (CCCHFA) administered local tagging operations off Cape Cod and in Southern New England as a Level I contractor between January 2003 and March 2005. CCCHFA is committed to taking cooperative research beyond the simple charter of commercial and recreational fishing vessels- the organization seeks to involve fishermen in every aspect of project design, planning and execution. As such, industry participation was a high priority in the local effort, and over 175 fishermen were recruited, selected, contracted and trained by CCCHFA to conduct actual tagging operations. 54 different vessels were used as platforms, ranging from 18 foot skiffs to 100 foot party boats. This diverse group of fishermen, representing the commercial and recreational sectors, and home-ported from Long Island to Cape Cod to Gloucester, tagged and released 59,946 codfish in 24 months using hook and line gear. CCCHFA was responsible for all aspects of the local deployment effort, including vessel contracting, scientific permits, contract administration, data entry, and local outreach. These local efforts were part of a much larger regional effort- CCCHFA also coordinated with four other Level I partners to standardize protocols, outreach and data management under the supervision of the Level II Coordinator, the Gulf of Maine Research Institute (GMRI). All project partners were contracted by NOAA Fisheries Cooperative Research Partners Program, and took technical guidance from the Northeast Fisheries Science Center.

C. Executive Summary

The NERCTP is one of three long-term, multi-year projects funded by the CRPP since its inception in 1999. The Broad Agency Announcement (BAA) soliciting proposals for the tag deployment phase of the effort sought potential contractors of two different types- Level I partners who would administer local tagging operations within the standardized parameters agreed to by all project stakeholders, and the Level II coordinating partner, who would facilitate project wide communications and collaboration, and handle centralized outreach, returns, and data management. These arrangements, and other critical project design elements including goals, objectives and broad funding guidelines, were developed by the New England Aquarium (NEAq) through a scoping process based upon port meetings. The NEAq Final Report, "Recommendations for Conducting a Collaborative Cod-Tagging Program for New England and Maritime Canada," is available through the NERCTP website at http://www.codresearch.org/NEAQ_Final_Report.htm for the interested reader. Prospective contractors sought to design local tagging efforts that would fulfill specific temporal and geographical distribution objectives outlined in this report and the BAA, and do so within broad operational guidelines from the same report. CCCHFA was contracted for 2003 and 2004 as the Level I partner who would conduct tagging operations in near-shore waters east and south of Cape Cod, and in the Coxes Ledge area in Southern New England.

A brief review of the overall NERCTP goals is necessary prior to any evaluation of CCCHFA performance under the Level I contract. The following are taken from the NEAq Final Report:

- “•Develop a collaborative cod-tagging program between fishermen and scientists to build bridges and strengthen working relationships towards improved understanding of marine ecosystem functioning*
- Improve understanding of current cod distribution and movement patterns throughout the Gulf of Maine, Georges Bank, Southern New England and coastal waters*
- Establish a foundation for future U.S./Canada, industry/scientific community collaborations to enhance understanding of shared marine resources (e.g., tagging programs for other species)”*
(NEAq, 2001)

CCCHFA, in its funding proposals then outlined internal goals and objectives that would accomplish the aims stated above, with an overall emphasis on maximizing industry participation:

- Conduct a successful collaborative research initiative, in which commercial fishermen work closely with scientists to realize the aims of the program
- Provide important supplemental income to fishing businesses which does not increase pressure on groundfish stocks
- Monitor movements and identify distributions of cod in inshore and offshore waters of the Gulf of Maine and Georges Bank
- Provide outreach to the fishing community to encourage the return of tags from captured fish and increase understanding of program goals.
- Conduct tagging operations according to the standardized techniques designed through the collaboration of regional program partners

CCCHFA, in collaboration with industry partners, designed a deployment schedule and operating plan built around a two-tiered approach, utilizing both dedicated trips, which took place under an Exempted Fishing Permit and sailed exclusively to tag cod, and non-dedicated trips, which involved opportunistic tagging off of commercial and recreational platforms. Except for a small number of fish tagged out of lobster traps, CCCHFA relied on exclusively on hook

and line as the capture technique for the fish tagged, employing a combination of electric and manual rod and reel, handlines, and bottom longlines.

The two year tag deployment effort by CCCHFA was successful in three critical areas. First, industry participation was maximized. An extraordinary number of fishermen had a direct role in tagging deployments, over 175 served as captain, crew, or industry technician over the two years, and this number does not include the unknown number of recreational fishermen, possibly several hundred more, who took part through non-dedicated tagging of their regulatory discards (sub-legal fish) on charter vessels. In all 54 vessels served as tagging platforms through CCCHFA, and the fishermen who work on these boats were the beneficiaries of over \$775,000 in supplemental income (Table 1). In fact, 83% of the total two year contract funds were distributed to New England fishermen.

Period	CRPP Contract	Direct Payments to Fishermen	Number of Fish Tagged
Year 1 (2003)	\$299,500.00	\$248,451.50	21,798
Year 2 (2004)	\$633,250.00	\$527,102.00	38,273
Total	\$932,750.00	\$775,553.50	60,071

Table 1- Summary of funding, revenue distribution, and tag deployments

Second, the level of involvement on the part of these fishermen went far beyond the simple charter of their vessels. CCCHFA successfully sought to involve fishermen in every aspect of the program, from design to execution, including the vast majority of the actual tagging. CCCHFA relied heavily on local commercial hook and line fishermen for crucial input on handling techniques, data collection, and operational scheduling, as practical, local realities were synthesized with standardized program protocols and distribution objectives. Fishermen were permitted to take dedicated cruises without on-board scientific oversight, after receiving classroom and on-water training from program staff. When a need for additional quality control and on-water tagging expertise was identified, CCCHFA implemented an industry technician program, in which local fishermen were given additional training and deployed on other vessels to assist with and oversee tagging operations.

Third, CCCHFA was able to achieve and exceed productivity objectives by tagging over 60,000 fish in two years. Satisfactory spatial and temporal distribution was achieved across all four originally contracted areas (Cape Cod and East of Chatham, Nantucket Shoals, Great South Channel, and Coxes Ledge) as well as an additional area added for year two (Gulf of Maine). Fish were tagged in every month from March 2003 through March 2005, and CCCHFA responded to other changing program needs like High Reward (HR) tagging and 100% double tagging as needed.

The two year effort proved highly successful, as CCCHFA demonstrated that hook and line is an effective, cost efficient way to deploy mark-recapture tags. Early return rates raised concerns over survivability, but pilot tagging and discard mortality work and increasing returns seem to confirm the alternative suspicions that local compliance issues and the high number of pre-recruits (cod less than 22 inches; these constituted almost 80% of the fish tagged by CCCHFA) were more to blame. While the high level of industry participation had some costs (greater managerial burden, data quality), the benefits were tremendous. Building upon the overall NERCTP goal of applying lessons learned to future efforts, CCCHFA and GMRI are collaborating on a cooperative haddock tagging project that builds upon the existing cod infrastructure and yields significant cost savings. Finally, the fishermen who worked on the

project were concerned that the time series has been interrupted. Likewise, the program partners have expressed that they would like to see the international coalition of scientists, managers and fishermen maintained. While a deployment on the scale of 2003-2005 is obviously not necessary or feasible, small-scale directed deployments and ancillary work like data-storage tagging, managed through the NERCTP structure, should be considered.

D. Purpose

1. Description of the Problems to be addressed:

The launch of the NERCTP was the culmination of four years of planning and represented an attempt to address, at least partially, a number of problems facing the fishing industry and other stakeholders. First, there were scientific questions to be answered, like the need for updated movement and distribution information: region-wide mark-recapture data had not been collected on cod since the 1950's (NEAq, 2001). More directed questions related to current management and science grew out of this overall goal, such as the need to study movement across closed area boundaries and evaluate the potential effects of the depressed stock abundance on movement. Finally, it was anticipated that valuable ancillary data, from growth information to analysis driven follow-up work, would emerge from such a large scale effort.

Secondly, groundfish stocks across New England were at historic lows, and effort reductions were beginning to cause economic pain for fishing and shoreside businesses. Recognizing that further restrictions would be required in coming years under the mandates of the Sustainable Fisheries Act, the U.S. Congress acted in 1999 to appropriate disaster relief funds to the New England fishing industry through the Northeast Regional Office of the National Marine Fisheries Service. This emergency appropriation provided funding for the Cooperative Research Partners Initiative (now the CRPP) which quickly moved to institutionalize and solidify cooperative research in New England through long term and short term projects designed to provide supplemental income to fishermen through research projects that addressed pressing management questions. The NERCTP was one of these long term projects.

Finally, the NERCTP would aim to address and ameliorate the historic and ongoing distrust between fishermen and government scientists. This communication barrier and mutual disregard had recently grown worse in New England, as years of suspicion about the fishing efficiency of the trawl survey vessels had proven somewhat justified with the discovery of mismarked trawl wires on the RV Albatross. The NERCTP, like all cooperative research, would break down this barrier in the best way possible- by creating venues for fishermen and scientists to work together on solving their mutual problems- not just in a hotel conference room, but on the deck of a vessel at sea.

2- Objectives:

- Facilitate the tagging of 57,800 cod between March 2003 and March 2005 with approximately even distribution between three general tagging areas: (Cape Cod and East of Chatham, Great South Channel, Nantucket Shoals). Tag as many fish as possible in a fourth area (Coxes Ledge) and up to 5,000 fish in nearshore areas of the Gulf of Maine (in response to objectives identified by program partners at the End of Year One meeting).
- Achieve chronological distribution by deploying tags throughout the year, while focusing effort during times which feature colder water.

- Disperse \$802,400 to fishermen and employ at least 40 captains and 40 crew, for a total of 80 participants including: 20 vessels as dedicated tagging platforms for 450 trips (450 trips X 100 tags = 45,000 tags) and 20 vessels as non-dedicated tagging platforms for 640 trips (640 trips X 20 tags = 12,800 tags).
- On directed tagging trips, compensate fishermen at \$1500 per trip.
- On non-dedicated tagging trips, compensate fishermen \$8 per fish tagged
- Hire Program Coordinator to oversee all local operations of the NERCTP. This individual will facilitate training, data collection, data storage, data distribution, fishermen management, and to observe dedicated tagging trips.
- Employ a Program Controller to assist the Program Coordinator in successful implementation of scientific protocols
- Implement industry technician program by recruiting, selecting and training local fishermen to work as tagging technicians
- Conduct classroom trainings to the extent necessary to ensure understanding of and adherence to program protocols
- Extend participation of fishermen beyond use of the vessel as a research platform by actively involving them in the research
- Conduct Captain's meetings to maintain communication and plan local strategy.
- Secure and administer Exempted Fishing Permits (EFP's) as necessary
- Ensure that Program Controller, Program Coordinator, or Technicians are aboard vessels for training, observation and assistance with 20% of dedicated tagging trips.
- Record onboard data according to standardized NERCTP protocols including position, date, time, fish length, tag number, depth, spawning condition and temperature.
- Handle fish and deploy tags according to standardized NERCTP protocols
- Minimize mortality.
- Revise procedures in response to new objectives identified by program partners, such as high reward (HR) tagging, focusing on spawning aggregations, and 100% double tagging.
- Assist with regional outreach as necessary (particularly program postering) and conduct local outreach including facilitation of returns.
- Recruit three interns from High Schools on Cape Cod to assist the Program Coordinator. The interns will gain valuable experience in collaborative research and further integrate the program into the community at large.
- Produce extensive local public relations opportunities for the program, including CCCHFA publications and earned media
- Develop protocol to gather, enter, store, back-up and distribute collected data in conjunction with the Level 2 Coordinator in a timely manner.
- Participate in all NERCTP functions as necessary including meetings, presentations, and conference calls, and provide bi-monthly updates required for Level II outreach.
- Report as necessary to CRPP, including interim progress, annual and final reports
- Show that hook and line fishing, including handgear, is a viable, cost effective way to deploy research tags
- Reach out to recreational fishermen by involving them in the program
- Implement a small scale, seafloor caging pilot study of tagging mortality in cooperation with an NEC funded study of catch and release mortality in the hook and line cod fishery.

E. Approach

1. Work Performed and Methodology

The methodology employed by CCCHFA involved application of standardized NERCTP protocols to the tagging operations. Extensive detail on the standardized program protocol can be found on the NERCTP website www.codresearch.org. Returns and rewarding was also handled by the Level II contractor, with CCCHFA playing only a supporting role. Additionally, much of the outreach work conducted by CCCHFA was done in collaboration with the Program Partners, and likewise local approaches to data management and deployment schedules are best understood in the overall context of the project. Since a great deal of the project methodology is presented in detail through the NERCTP website, this section will focus on techniques used by CCCHFA to implement these procedures and approaches locally, and apply them through the use of a relatively large research fleet.

CCCHFA employed a Program Coordinator to oversee all aspects of the local operations. The Program Coordinator administered logistical and technical aspects of the tag deployment schedule, ultimately making the day to day decisions which dictated when and where fish were tagged. The Program Coordinator was also responsible for training program participants in the handling, tagging and data collection protocols. In this respect the position held office and field responsibilities- the Program Coordinator spent considerable time on the water. The Program Coordinator recruited, selected, contracted and managed the participating vessels, and all other aspect of managing the CRPP contract. Finally, the Program Coordinator handled all CCCHFA communications and relations with the CRPP, the Level II Coordinator, and the Program Partners.

CCCHFA employed a Program Controller to assist the Program Coordinator with implementation of the standardized protocol and provide scientific oversight and quality control. The Controller also spent considerable time on the water, as well as assisting with classroom trainings, logistics, equipment procurement, vessel management, and partner and funder relations.

The CCCHFA Finance Director played a critical role, as the large size of the effort and the large number of participants led to extensive payroll and accounting workloads. The Program Coordinator and Finance Director employed a division of labor with multiple layers of error checking built in to ensure accurate and prompt payment. While somewhat outside the scope of a typical scientific methodology description, the commercial line of credit secured by CCCHFA bears mention here as a critical cog in the functioning of the local program. CCCHFA, a small non-profit, secured this instrument in response to feedback from the industry participants regarding the payment terms. Simply put, the reimbursement basis of the federal contract, along with the typical invoice turnaround time (8-12 weeks), and the size of the payroll burden, made it impossible for CCCHFA to pay it's contractors in a timely fashion. It was determined that few vessel owners would choose to participate in research with a 2 month wait for payment. With the line of credit, CCCHFA was able to pay the fishermen in a period similar to their typical commercial fishing settlement (5 business days). This was absolutely vital to the effort, and this aspect of the program was managed by the CCCHFA Finance Director.

In order to communicate these procedures to the fishermen who performed the bulk of the actual tagging for CCCHFA, a combination of classroom and on-water training was used. CCCHFA conducted a total of 10 official classroom trainings over two years, along with numerous unofficial sessions for individuals and small groups as necessary. The classroom trainings included a program introduction, datasheet familiarization, a 5 minute training video, equipment familiarization, handling protocol review, and actual tagging of cod with dissection to study tag placements. The tagging trainings were also well attended by the press, recreational fishermen, and members of the community. Training sessions were led by the Program Coordinator and Program Controller, who also followed up with additional training for all captains and crews on board the vessels, on a minimum of the vessel's first trip and 20% of subsequent trips. CCCHFA created an interim tagging manual to facilitate training in early 2003, since tagging operations needed to begin prior to completion of the standard program manual.

In year two of the project, CCCHFA maximized onboard oversight and training opportunities by employing select local fishermen as tagging technicians. This allowed for observation, quality control and efficiency on the greatly increased number of trips without undue burden on the Program Coordinator, who necessarily took on greater administrative and managerial responsibilities in year two. These industry technicians allowed for fishermen with a science background or high level of demonstrated skill who did not necessarily own a vessel to have a high degree of participation. The technician program also had an unintended benefit when the high reward component of the study was added in June of 2004. The Program Partners determined that fleetwide deployment of HR tags at 10% was not advisable for CCCHFA, as turning over HR tags to that many individuals would require an unacceptable level of risk and confusion. Instead, only program staff and technicians were issued HR tags, and deployed them on any trips they were on. Likewise the technicians were invaluable in communicating the other major change in the program- the switch to 100% double tagging in fall 2004.

CCCHFA employed a combination of dedicated and non-dedicated tagging. Dedicated tagging took place under an EFP with a DAS exemption, and the vessel sailed exclusively for the purpose of tagging cod. All cod caught that were viable for tagging were tagged and released, while all other fish caught were released unharmed. While many of these trips were conducted by fishermen without onboard observation, many trips were observed by program staff or technicians, including the first trip for all vessels at a minimum. Dedicated trips required a captain and at least one crew member. These trips were compensated at a base rate of \$1500.00, with an incentive system later added to allow vessels with a satisfactory average performance to earn additional bonus pay for productivity beyond 100 fish per trip. Non-dedicated tagging was opportunistic- participating fishermen could tag fish during the course of normal vessel operations, whether these operations were commercial, recreational or charter in nature. In practice the majority of the fish tagged under this component were sub-legal (<22") cod caught by commercial fishermen, however non-dedicated tagging off charter and party vessels was also important, especially in light of the substantial number of recreational fishermen exposed to the program. Fishermen were compensated for non-dedicated tagging by the fish, at either \$8.00, or in cases of high productivity, at \$5.00 under a bonus system. Depending upon deployment objectives and participation, a variable daily cap was in place ranging from zero to twenty to open at various times during the program. In all, 399 dedicated trips were sailed over the course of the program, and 410 non-dedicated tagging events took place (an event defined as a trip on which cod were tagged).

Dedicated trips used handgear exclusively as the mode of capture. Handgear is defined as including the following: handlines, manual rod and reel, and electric rod and reel, collectively referred to locally as jigging. These gears are shown in figure 1 below. Whenever practicable, barbless or barb-disabled hooks were used, and treble hooks were prohibited. Non-dedicated tagging utilized handgear, bottom longline, and lobster traps as the mode of capture.

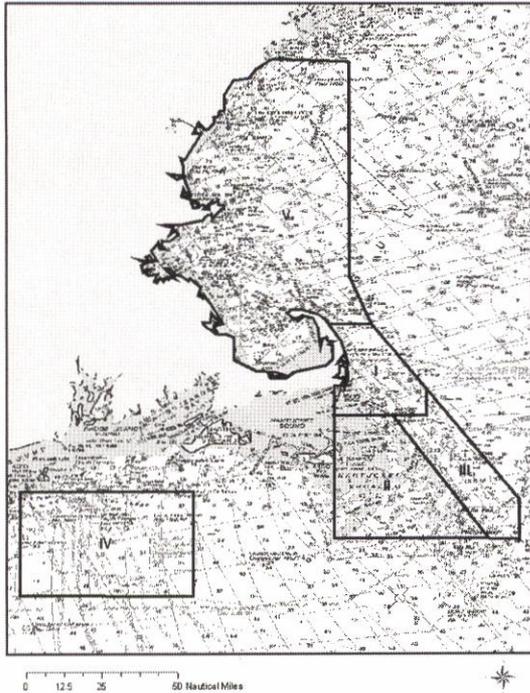


Figure 1: Various handgear types used to capture fish on dedicated trips. From left, handline, manual rod and reel, and electric rod and reel.

CCCHFA planned dedicated sailings and non-dedicated tagging based upon a deployment schedule basically drawn from the NEAq report, elaborated upon in the project proposal, refined by consultations with Program Partners, and translated into practical, operational strategy through meetings with the vessel captains. This schedule basically called for even distribution across three major general tagging areas off Cape Cod, and as many deployments as practicable in a fourth area, Coxes Ledge. At the end of year one meeting, the Program Partners tasked CCCHFA and Maine DMR with attempting additional deployments in a fifth area- the inshore Gulf of Maine. These tagging areas are outlined in figure 2. In addition to the spatial distribution objectives, CCCHFA also considered two additional priorities: temporal distribution, with a goal of deploying tags in all areas throughout the year, and tagging of fish from spawning aggregations. Finally, CCCHFA sought to avoid saturation, defined as roughly 5,000 tags in any given area in a season.

In practice, regular captains meetings were held to compare program needs with fish availability, and to outline a schedule of tagging trips. Twelve of these meetings were held over the course of the project. These meetings were often the forum for critical input from the captains, for instance, they gave critical input into the design of the program datasheets in early 2003.

Based upon sea surface temperature and the pace of deck operations, vessel crews were authorized to employ a live well (figure 3) for extended tanking and recovery, or tag and release the fish immediately. When sea surface temperatures were below 50 degrees Fahrenheit, a circulated sea water live well was usually used to hold the fish prior to tagging, especially on dedicated trips. This was especially important when fish were being caught at a rapid rate: jigging is streaky, and when the fish are biting they frequently are caught at too high a rate to effectively keep up with tagging, and it is also not advisable to expend time on tagging at the expense of fishing during these streaks. Many of the longline captains also employed a live well during non-summer months to hold sub-legal fish briefly until the crew could tag and release them. Live well tanking also offered opportunities to screen the fish so that only the strongest individuals were tagged



- Area Descriptions**
- I. Cape Cod/East of Chatham**
 - II. Nantucket Shoals**
 - III. Great South Channel**
 - IV. Coxes Ledge**
 - V. Inshore Gulf of Maine**

Figure 2- General Tagging Areas for CCCHFA operations

When sea surface temperatures exceeded 50 degrees, extended tanking was discouraged. This cut-off point was based not only on apparent results in this study, but also on the long experience of the local captains in the live fish market. In these times of warm surface water, fish were evaluated, tagged and released immediately, and deck operations were either tailored around the pace of tagging, or tagging was discontinued. In all cases, whether extended tanking was performed or not, a temporary live well was available for short term (<5 minutes) holding of fish; in no cases were fish allowed to sit on deck.

CCCHFA constructed custom cradle style measuring boards (see figure 4) for use in the project. These featured a smooth surface with a recessed aluminum ruler (standard and metric) and raised sides to assist in immobilizing fish in the proper position for tagging.

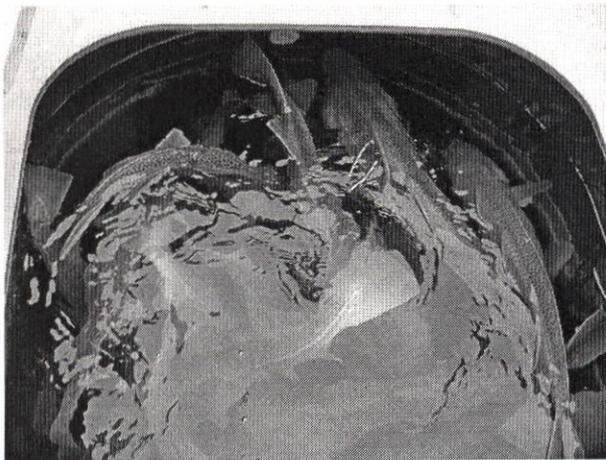


Figure 3- cod in a live well



Figure 4- cradle boards under construction

CCCHFA was responsible for local data management, including datasheet error checking, data security, and data entry. CCCHFA also maintained a local database to track deployments, tag inventory, finances and payroll. Error checking began upon submission of datasheets by Captains, crews or techs to the Program Coordinator, when each trip's datasheets were scanned for errors or omissions. A second error check took place upon data entry. Tagging data was entered into the program's online database as quickly as possible by the Program Coordinator, volunteers, interns, or contracted support staff, with additional assistance from GMRI staff in year 1. Photocopies were made of any tagging data not yet entered and stored off-site prior to sending the copies to GMRI. Original hard copies were maintained at CCCHFA, and at the time of this writing, are still stored there, although it is anticipated that they will be transferred to GMRI or the NEFSC at some point.

Outreach duties relegated to CCCHFA included local press placements, local postering, facilitation of local returns, public meetings, dockside and community contacts, CCCHFA newsletter and annual report articles, CCCHFA website placements, and presentations at local and regional fisheries conferences.

Finally, CCCHFA employed seafloor caging to conduct pilot work on tagging related mortality, taking advantage of an ongoing study of cod discard mortality that offered equipment and experience with this technique. Two separate treatments were performed on sub-legal cod prior to caging in a 4 foot diameter by 2 foot high cylindrical wire mesh cage: tagged and non tagged. These cages were left on the seafloor at the same depth as the capture depth for approximately 72 hours prior to retrieval. Upon retrieval the fish were assessed for length and condition prior to release.

2. Project Management

The following individuals and organizations performed the work described in this report

<p>CCCHFA Staff: Program Coordinator: Tom Rudolph Executive Director: Paul Parker Communications Director: Melissa Weidman Finance Director: Nat Mason Program Coordinator: Melissa Sanderson Administrative Assistant: Betsy Dorbian CCCHFA Interns Graduate Intern: Laura Bozzi Graduate Intern: Nichola Meserve Undergraduate Intern: Abby Taylor High School Intern: Eddie Porter High School Intern: Austin Johntra</p>	<p>Independent Consultants: Program Controller: Jim Fair Tagging Technicians: Albert Nardini Renee Gagne Jeremy Bicknell John Kenneway Pete Schimmel Chip Foster Ethan Brown Ned Parker Ethan Estey Anne Magoon Tom Traina Jon Foster Data Entry Support: Noka Agnew Eddie Porter Sally Foster</p>
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Table 2- Project Staff

Fishing Vessel	Captain
FV Snug Harbor Express	Al Conti
FV Sadie	Al Nardini
FV Surfbreaker	Al Yuknavich
FV Ridla	Andy Glynn
FV Saga	Ben Bergquist
FV Grey Ghost	Ben McLoughlin
FV Ben Fishing	Ben Morgan
FV Rueby	Bill Chaprales
FV Booby Hatch; FV Headhunter	Bob Miller
FV Shalako	Bob Nagy
FV Never Enough	Bruce Kaminski
FV Glory K	Bruce Kruczek
FV Last Chance	Buster McCarthy
FV Brandi Ellen II	Dale Tripp
FV Sorry Charlie	Dan Shannon
FV Crystal Lee; FV Bad Seed	Dave Nadeau
FV Tenacious; FV Mattanza	Eric Hesse
FV Lady Frances; FV Gail Frances	Frank Blount
FV Miss Morgan	Glen Legeyt
FV Alicia Ann	Greg Walinski
FV Shannon and Cindy	Jack Reynolds
FV Poo Bah	James Young
FV Yellowbird	Jamie Eldredge
FV Zekka	John Pappalardo
FV Fiasco	Ken Eldredge
FV Bay Breeze	Kerrian Finlay
FV Time Bandit	Kurt Martin
FV Rosey S	Les Shwom
FV Sea Holly	Mark Leach
FV Bad Dog	Michael Anderson
FV Magic	Mike Abdow
FV Susan Lee	Mike Russo
FV Althea K	Pete Kaizer
FV Seahound	Peter W. Taylor
FV Frenzy	Ray Kane
FV Lyndsy Liz	Ray Ransom
FV Breakaway	Rich Etzel
FV Miss Dorothy	Rick Tavano
FV William Gregory	Roger Horne
FV Peggy B II	Ron Braun
FV Murrulet	Steve Smith
FV Riena Marie	Ted Ligenza
FV Wendy Jean	Terry Pickard
FV Blue Sky	Todd Eadie
FV Zachary T; FV Tuna Eclipse	Tom Barker
FV Sea Win	Tom Luce
FV Sea Wolf	Tom Smith
FV Arlie X	Tom Szado
FV Sue-Z	Tom Traina
FV Miss Melodye	Wally Bicknell

Table 3- Project participants (captains and fishing vessels)

Fisherman	Fisherman	Fisherman	Fisherman
Amy Robillard	Dave Yuknavich	Jon Hesse	Nick O' Toole
Andy Binowski	Dave Ziemba	Jon Peters	Pat Doherty
Bill Baptist	David Ziemba	Ken Macara	Pat Franey
Bill Carrol	Dick Canon	Ken Watts	Pat McLoughlin
Bill Gibson	Dominic Concillio	Kerry Doon	Pat Rochick
Bill Trombi	Ed Harrison	Kurt Hedmark	Paul McCarthy
Billy Adams	Ed Rich	Kyle Blount	Paul Parker
Billy Gibson	Garrett Lambert	Luther Bates	Paul Tebo
Bob Bleakney	Gary Dyer	Mark Christian	Pete Parker
Bob Lavec	George Latos	Mark Szymanski	Pete Tamagini
Bob Olearcek	Jake Shwom	Matt Bunnell	Porter Bingle
Brian Blanchard	James Martin	Matt Conti	Ray Sacramone
Brian Wiley	James McGillen	Matt Mendoza	Rich Barkee
Buck Bengston	Jason French	Matt Watts	Rich DeLuca
Buzz Darling	Jason Pilsbury	Mel Christian	Richard Cannon
Chris Green	Jeff Brill	Michael O'Grady	Richard Scolavino
Chris Olszawecki	Jeremy Bicknell	Mike Call	Rick Lonergan
Dan Ahmos	Jeremy Eccard	Mike Emond	Rick Silva
Dan Gault	Jerry Pacard	Mike Mendalla	Rob Nagy Jr.
Dan Harding	Jerry Perry	Mike Neveux	Rob Nance
Dan Howes	Jim Kostas	Mike O'Brien	Russell Clark
Dana Booth	John Bingle	Mike O'Grady	Russell Murphy
Darroll Anderson	John Nance	Neal Audres	Seamus Muldoon
Daryl Staniszewski	John Shulcusky	Nick Blount	Shawn Sullivan
Dave Brisbois	John Small	Nick Muto	Steve Currie
Tom Flint	Tome Leblanc	Vince Woolley	Will Martin
Tom Flynn	Trevor Tavano	Wayne Talkenson	
Tom Holmes	Tyler Klaskow	Will Dubille	

Table 4- Project participants (crews)

Additionally, an unknown number of recreational fishermen, likely several hundred, participated in the program through non-dedicated tagging that took place on vessels they had chartered or party boats from the Frances Fleet. Also, a number of volunteers from the Cape Cod Community participated by joining CCCHFA fishermen for a dedicated trip.

The tagging training video and documentary footage of the project background and operations were produced free of charge by Rick Morris of Eclipse Diving and Video Productions. Ed Clark of the Massachusetts Division of Marine Fisheries provided valuable assistance and expertise in the construction of the Cradle Boards, and DMF generously donated the use of their shop in Sandwich, MA. Several Cape Cod fishermen and processors provided fish for training purposes, including Peter Taylor, Mike Russo, Ted Ligenza, Mike Abdow, and Chatham Fish and Lobster. Art Tsigas, Frank Kunz and other members of the United States Coast Guard Auxiliary were instrumental in ensuring a safer research fleet through the Fishing Vessel Dockside Examinations they performed in response to a CCCHFA Board of Director mandate.

F. Findings

1. Accomplishments and Findings

- 60,071 cod were tagged over the course of the contract with approximately even distribution over the three major general tagging areas. 709 cod were tagged in the Coxes Ledge Area and 1,135 were tagged in the Inshore Gulf of Maine. These accomplishments are summarized in Table 5, which also illustrates a very small number of cod tagged opportunistically on offshore Georges Bank (GB)
- Chronological distribution objectives were achieved, as cod were tagged in every month of the contract duration, with the focus of the effort on seasons with lower sea surface temperatures. 52,630 of the cod were tagged in months considered to have cold to cool surface temperatures (October through June) while 7,441 of the cod were tagged in months considered to have warm to hot surface temperatures (July through September).
- A list of tagging trips and general locations, by vessel and tied to expenditures, is attached to this report as Appendix A (Tagging Trip Log Summary with Costs)

Month	General Tagging Area						Monthly Total
	1	2	3	4	5	GB	
March-03	136	1,123					1,259
April-03	5,351	1,083	2,386				8,820
May-03		4,843	3,639				8,482
June-03	144		1,055				1,199
July-03	144		370	34			548
August-03	66	2	165	13			246
September-03	339	11	299				649
October-03	20	59	67				146
November-03	42	344	170				556
December-03	519	21	135	13			688
January-04	942		425				1,367
February-04	1,146	114					1,260
March-04	96	27		22			145
April-04	2,451			71			2,522
May-04	1,470	10,982	207	15	534		13,208
June-04	366	174	2,544	10	185		3,279
July-04	259	44	292	29	234		858
August-04	992	116	92		81		1,281
September-04	986	230	2,590			53	3,859
October-04	623	191	3,580				4,394
November-04	609	1,364	493	51	101		2,618
December-04	965	262	62	88			1,377
January-05	732		181	2			915
February-05				34			34
March-05	19			182			201
April-05			11	87			98
May-05		4		58			62
Area Totals	18,417	20,994	18,763	709	1,135	53	60,071

Table 5- Spatial and temporal distribution of tag deployments

- \$775,553.50 was dispersed in direct payments to fishermen for vessel time and labor (see Appendix B (Finance Report) for a detailed rendering of expenditures within the context of the contract value).
- 50 captains and 110 crew members on 55 vessels executed 399 dedicated tagging trips and non-dedicated tagging took place on 410 trips. In total, 46,277 fish were tagged on dedicated trips and 13,794 fish were tagged on non-dedicated trips.
- CCCHFA employed a Program Coordinator, starting in January 2003, who oversaw all aspects of the local effort, including recruitment, selection, contracting, training, and management of fishermen. The Program Coordinator also oversaw data collection, storage and processing, supervised the management of the NOAA contract, handled local outreach, managed equipment, and managed personnel including consultants, interns, staff and technicians. Finally, the Program Coordinator spent considerable time in the field, sailing on 41 tagging trips during the project.
- CCCHFA contracted a Program Controller starting in late January 2003. The Program Controller provided invaluable assistance in the implementation of scientific protocols, assisting with training, equipment procurement and management, vessel management, partner relations, and also providing onboard oversight, training and quality control for a total of 20 dedicated tagging trips. Please reference the Program Controller's evaluation in Section G.1 of this report for additional information.
- The Program Controller and Finance Director successfully managed administrative aspects of the program including payroll and equipment purchase and management. See Appendix B- (Finance Report) for a disposition accounting of permanent equipment.
- A successful industry technician program was implemented, as 12 local fishermen were recruited and trained to a higher level and provided additional onboard oversight, assistance, and quality control on 112 tagging trips. These technicians also provided at-sea implementation of the HR tagging initiative in support of program staff.
- 10 formal classroom trainings were held along with numerous informal tutorial sessions to present program protocols and information to participants, press, and community members.
- Fishermen's participation was taken far beyond the charter of their vessels, as fishermen performed the vast majority of the actual tagging and data collection in the CCCHFA effort. Additionally, fishermen were an integral part of project planning, especially in protocol development and effort scheduling.
- 12 formal Captains meetings were held over the course of the project, along with numerous planning sessions
- 1 Letter of Authorization (LOA) and 2 Exempted Fishing Permits (EFP) were obtained and administered during the project to cover dedicated operations. The LOA covered year 1 operations, and the two EFP's covered Georges Bank and Gulf of Maine operations respectively, in year 2.
- 40% (160/399) of dedicated trips were observed by the Program Coordinator, Program Controller, or industry technicians.
- Tagging data including position, date, time, fish length, tag number, depth, spawning condition and temperature were collected in accordance with program protocols.
- Fish were handled and tags deployed in accordance with program protocols, resulting in minimal apparent mortality.

- Three major revisions in program wide procedures were implemented: HR tagging (n=420 HR deployments), targeting of spawning aggregations (especially in late 2004 and early 2005), and 100% double tagging.
- Program posters were distributed twice across the assigned area (roughly Plymouth to Woods Hole to Provincetown)
- The Program Coordinator and other CCCHFA staff provided facilitation of program returns through dock visits and the CCCHFA office facility.
- 2 interns from high schools on Cape Cod and in Vermont, and one undergraduate intern from Bennington College worked on the project, along with several graduate student interns, all gaining valuable experience in collaborative research and providing connections to the community
- CCCHFA provided extensive public relations opportunities for the program, including earned print, radio and television media, features in CCCHFA publications, and presentations to community groups (n=6) and fisheries conferences (n=2). A press compilation packet is enclosed with this report as Appendix C- Press Clippings.
- Data were securely stored, preliminarily screened for errors, entered into the program database and submitted for approval. To date, data entry and submission is complete except for final auditing on 411 releases which are entered but for which submission is delayed due to the audits.
- CCCHFA program staff participated in all NERCTP meetings, conference calls and presentations during the contract period. All bi-monthly updates were submitted as necessary.
- Interim progress and annual reports were provided to CRPP
- CCCHFA effectively demonstrated that hook and line fishing is a viable, efficient, cost effective way to deploy mark-recapture tags, by exceeding productivity targets within the program budget. Including all local infrastructure costs (total contract expenditures) the average cost per fish tagged was \$15.14
- Recreational fishermen were actively included in the program. In addition to the contracting of numerous charter vessels and non-dedicated tagging operations off charter and party boats, a number of recreational volunteers from the community attended training sessions and sailed on dedicated trips to assist with and take part in tagging operations. 32% (17/53) of the vessels contracted by CCCHFA were charter/recreational vessels.
- Pilot work on tagging mortality was undertaken. Preliminary results are presented below, however the sample sizes were considered too small to draw conclusions, and further work would be needed to include seasonal variations in the experiment in addition to the depth variations considered. Perhaps the most important accomplishment in this regard was the development of techniques for seafloor caging of cod and other species, especially in highly tidal areas. The low-profile cage developed by CCCHFA fishermen has proven to be extremely reliable, and has in fact been used as the basis for the design of seafloor cages in other regional studies.

Depth	Untagged			Tagged		
	# Survivors	# Caged	% Survival	# Survivors	# Caged	% Survival
20 fathoms	50	52	96%	49	51	96%
30 fathoms	19	19	100%	19	20	95%

40 fathoms	9	14	64%	4	6	67%
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Table 6- preliminary results of tagging mortality pilot study on jigged sub-legal (<22") cod after 72 hours of seafloor caging at capture depth.

Data collected in spring 2004 at sea surface temperatures from 46 to 58 degrees.

2. Problems Encountered

Considering the scope of the effort, CCCHFA encountered surprisingly few problems throughout the program. However, several areas bear mention, most related to the unique small boat, highly participatory nature of the CCCHFA effort, and the overall depressed condition of the cod stock, especially in Southern New England:

- Managing the large number of participants, while clearly a net benefit due to the important social accomplishments as well as the economic efficiencies gained by utilizing the existing vessel personnel for the science, also presented challenges to the CCCHFA, and costs to the project. Clearly training 50 vessel captains, 12 technicians and over 100 crew members in program procedures was a daunting task, especially in light of shifting program priorities and new procedures. However, this task paled in comparison to vessel coordination. At any given time when an abundance of fish presented itself in an area within the program's assigned deployment zone, CCCHFA would likely have 5-10 vessels working there on a given day. Indeed, this flexibility and capacity to concentrate effort quickly was strength of the program. However, the day to day management of this fleet was extremely time consuming for the program staff. In comparison to other Level I partners, the vessel contracting, management and payroll requirements were multiplied by a factor of 3-10 times.
- With the exception of the Frances Fleet party boats, CCCHFA used exclusively dayboats for the tagging operations. These small (25 to 45 foot) vessels are extremely weather sensitive, especially in the spring, fall and winter months in which the effort was concentrated. They typically do not schedule a trip until late in the prior afternoon, and even then this trip is frequently cancelled. Scheduling program staff and technician observations is quite difficult under these conditions. The winters of 2003-2004 and 2004-2005 were two of the worst in recent memory as far as fishing weather. Both featured continual storms and long periods of iced in harbors. These dayboat concerns conspired with the large number of actively participating vessels to make logistical and scheduling activities a major component of the Program Coordinator's responsibilities, certainly beyond original estimates.
- Fishing has always been feast or famine to some extent, and certainly in the modern era in New England this is the case. Depleted stocks, including GB and GOM cod, can be very difficult to locate and effectively target, for harvest or research. Many Cape Cod fishermen consider the last two years to be particularly bad for the inshore stocks off Cape Cod. Because the fish were unavailable for long periods of time, CCCHFA was forced to make difficult decisions about ceasing operations due to localized saturation. Walking away from aggregations of fish was particularly difficult for our industry partners to understand, because the realistically foresaw the possibility that no other fish would come inshore to allow the program to resume. In light of this, CCCHFA endeavored to enforce the 5,000 fish cap flexibly, while simultaneously investing resources into exploratory work to locate fish in new areas.

Communication was key- the concept of saturation in the context of the overall program goals needed to be constantly reinforced to the fishermen so they would understand the effort scheduling.

- The above mentioned problems of regional and localized cod depletion were nowhere more evident than in Southern New England. Despite significant efforts through the commercial and recreational fleets from Long Island, Rhode Island and Southeastern Massachusetts, tag deployments on Coxes Ledge and off Block Island were disappointing (n=709). It would seem that throughout most of the year a very few residential fish can be found on small hard-bottom spots, but their numbers are usually so low as to render commercial or charter operations unrealistic. Furthermore, the times of year when these fish may be found typically feature warm water, making tagging operations difficult and possibly unadvisable. Beyond these residents, the Coxes Area typically sees a very short lived, but from all reports very impressive visit from a body of fish in late winter or early spring. It was this elusive and fast moving body of fish that proved most frustrating to CCCHFA, as despite our efforts we were unable to bring the program resources to bear upon it. In 2003, the program was not yet operational when the bite happened; in 2004 weather was the culprit, and in 2005 weather, scheduling conflicts with the SNE vessels, and the end of the project combined to reduce our effectiveness. This presumed migration typically lasts about three weeks, so it is not surprising that it was difficult to pin down.
- Recapture rates for fish tagged by CCCHFA lagged behind those of the other partners in the early months of the project, generating concern over the survival rates of these fish. It is more likely, especially in light of the ongoing hook discard mortality (preliminary) data generated by CCCHFA under an NEC grant which shows excellent survival of sub-legal hook caught fish that other factors are at play. The most likely explanation has two parts: the high percentage of pre-recruits (<22 inches or 56 centimeters) tagged by CCCHFA, and non-compliance among fishermen who direct effort on the areas in which CCCHFA tagged. With regards to the first likely factor, because hook and line is not as size selective as the mesh fisheries employed by the other major tagging partners (Maine DMR/GMRI and S Mast) many of the fish tagged by CCCHFA were between 14 and 22 inches. In fact an examination of the approved CCCHFA data in the program database reveals that 80% (47,024/58,896) of the fish tagged were less than the legal minimum size. Many of these fish, especially those on the lower end, are not yet fully recruited to the mesh fisheries, therefore recapture rates are lower. As these fish recruit the CCCHFA recapture rate should increase; recent developments would therefore seem to confirm this, as this rate has indeed increased. Secondly, there is a large component of the local fishing fleet that was actively opposed to the program for the past two plus years, and therefore non-compliant. This constituency, the Chatham and Harwich sink gillnet fleet, exerts a very significant amount of fishing effort (roughly 20% of the GB cod landings during the qualifying period), and by all accounts has caught high numbers of tagged fish in the last two years and deliberately failed to report them. Recent developments which are leading more of these fishermen to report have demonstrated that they do catch tagged fish, bearing out this theory to some extent.
- The unavailability of the program database at the time of program launch created a data backlog from which CCCHFA was slow to recover. While the online tool is a remarkable and reliable achievement, its dependence upon the internet necessarily led to times when data entry was not efficient or even possible. Finally, the addition of

program directives like 100% double tagging slowed the process as well. While GMRI provided significant assistance in early 2004 with year 1 data, the backlog continued, and was certainly not ideal. Critical interactive and outreach components of the program failed to work at their highest potential, in part due to the delay in entry, submission and approval of original release data. Again the large scope and broad diversity of participants were also factors: CCCHFA underestimated the time commitment of the data entry, and the large number of actual data collectors led to data which required more time and effort to ensure it's accuracy

- This last is the final area of concern. It is understandable, even expected, that the large number of fishermen who physically tagged fish and recorded data, as opposed to program scientific staff, would compile a dataset with a higher percentage of errors or inaccuracies. While final audit of the NERCTP data has not yet been done, preliminary reports would seem to indicate that this is indeed the case. However, the problems do not appear to be beyond acceptable levels.

3. Additional Work Needed

- Most of the fishermen involved in the project would like to see tagging continue. They express constant concern over the condition of the GB cod stock, and see better information, including a continuous time series to track movements and growth, as a crucial link in the chain of improved management and cod recovery. The supplemental income provided by research is a vital part of their interim business plans on the road to recovery.
- The program partners identified ancillary priorities to be investigated through a group approach by the coalition of industry, science and management that built the NERCTP. These ancillary projects should be considered for funding and execution by the program partners as a group; allowing for maintenance of the coalition will also provide invaluable support to the relationships built during that study.
- Both of the above objectives could be refined and focused based on preliminary analysis of the dataset accumulated to date.
- Continuation of deployments on a small scale would allow for focused effort on temporal, spatial and biological gaps from the first two years. For instance, a limited amount of tagging could be focused on the Coxes Ledge area, or on spawning aggregations.
- The effort vs. compliance analysis, previously discussed on several occasions by the program partners, should be undertaken to tease out the real reasons behind the initial lower recapture rates among fish tagged by CCCHFA. This analysis would take advantage of the fact that several gillnet vessels from Chatham are known to be 100% compliant. By comparing their recapture per unit effort data to that of the non-compliant vessels, important insights into this problem can be achieved. For instance, the data could be extrapolated to reveal an estimate of the potential unreported recaptures by this fleet over the course of the program. In addition to effort, landings could be used as an alternative approach.
- Several years of work have possibly begun to pay off, as outreach to the sink gillnet fleet has become to overcome years of acrimony and general distrust of the government science and cooperative research program, leading to increased returns from this fleet. This outreach effort must continue through the expected term of liberty of the fish tagged in the NERCTP.

- Every effort to should be made to take advantage of the existing NERCTP infrastructure when tagging other species. For example, CCCHFA, GMRI and the NEFSC have combined efforts to tag haddock under this model and realized significant cost and labor savings by building upon the existing database and returns facilities at GMRI.

G. Evaluation

1. Evaluation of Attainment of Project Goals and Objectives

The project goals were attained:

- CCCHFA conducted a successful collaborative research program, in which commercial fishermen worked closely with scientists to realize the aims of the program.
- The CRPP contract administered by CCCHFA provided important supplemental income to fishing businesses which did not increase pressure on groundfish stocks
- The data collected on 60,071 cod releases and the subsequent recaptures, when combined with other NERCTP data, will allow for monitoring of movements and identification of distributions of cod in inshore and offshore waters of the Gulf of Maine and Georges Bank
- CCCHFA provided outreach to the fishing community to encourage the return of tags from captured fish and increase understanding of program goals
- Tagging operations were conducted according to the standardized techniques designed through the collaboration of regional program partners

Specific programmatic objectives were also attained:

- CCCHFA accomplishments in the administration of the contract, as outlined in Section F.1 of this report, constitute satisfaction of the objectives outlined in Section D.2 as compiled from the original contract proposal and interim progress reports.
- T-bar tags were deployed on 60,071 fish, predominantly by fishermen, through the use of dedicated and non-dedicated tagging, and all necessary functions in support of that effort were performed
- The report of the Program Controller offers insights useful to an evaluation of performance:

Program Controller Report

When the Cape Cod Commercial Hook Fishermen's Association (CCCHFA) first applied to the Commercial Fisheries Research Partners Initiative in 2002 for participation in the Northeast Regional Cod Tagging Program, it was understood that the application would meet with some level of skepticism. CCCHFA proposed to conduct an experimental tagging program involving independent deployment of tags by a large number of small commercial vessels. Tagging operations would be conducted in shoal waters, using hook and line to capture the fish, without government or third party scientists or technicians aboard. Fishermen would be trained to apply the tags and keep detailed records of fish sizes, tag numbers, and release location data. This represented a departure from established research methods, and naturally raised concerns about the reliability of data collected. However, it significantly furthered the goals of collaborative research by involving large numbers of fishermen in the small boat sector, would evaluate new methods for capture and release, and deploy large numbers of tags in near shore areas of Nantucket Shelf and the Gulf of Maine.

To help alleviate these concerns, CCCHFA proposed the position of Controller to provide more experience in the organizational structure, train program personnel and subcontractors in the proper handling of fish, use of tagging equipment, and data collection through classroom sessions and at-sea training and observation. My goal from the start was to create a high level of quality control and standardize procedures to the point where the data would be accepted without question. Prior to training I assisted the Program Coordinator in drafting a tagging protocol to be used until an official manual for the overall cooperative program was completed. We also constructed measuring boards based on a design developed by MADMF, and began to assemble equipment for tagging kits. My prior experience with state research projects and cooperative research proved to be useful during this phase, and we were able to begin training before the regional program was operational. This early start made it possible to begin tagging in early spring when the fish became available to the Chatham/Harwich fleet.

Periodic captains' meetings were held to introduce fishermen to the program and explain program goals and procedures. This phase, and subsequent training sessions were critical to achieving a high level of standardization in such a large group of participants. We stressed repeatedly the importance of quality control and accuracy in acceptance of this and future research projects proposed by the association. Classroom sessions involved the operation and maintenance of tagging equipment, with fish provided for demonstration and practice tagging. Practice fish were dissected to examine cod anatomy at the tagging site, and provide a visual reference for correct tag placement. Repetitive sessions were held to achieve as much familiarity as possible with equipment and data recording procedures before the actual tagging trips began. Final training occurred on each vessel on its first tagging trip, under actual field conditions. All aspects of tagging and data collection were observed and evaluated before any independent trips were made, with an emphasis on accuracy and standardization. Additional trips were made on each vessel to assist with and observe tagging operations. The percentage of observed tagging trips was increased in year two by training and contracting additional technicians.

I believe that the primary reason for the success of this program is the infrastructure provided by CCCHFA. The association provides the support services necessary to conduct an experimental program of this magnitude, including a communication and IS network, administrative staff, accounting/financial services, and a central location for training, meetings and equipment storage. This support makes it possible for a large number of independent operators to act as a unit, and provides for close communication and supervision, as well as the ability to manage a letter of credit to facilitate the disbursement of payments to vessel owners. Close coordination between the association and the captains, and between the captains themselves, provided a high level of standardization and accountability. The office served as a clearinghouse for data, and staff and interns also assisted the Program Coordinator with data entry and transmittal to GMRI.

I was also impressed with the participation of the captains and crews of the contracted vessels. It goes without saying that their ability to find and capture fish in coastal waters cannot be questioned. They adapted well to the tagging equipment and handling of fish in a manner to maximize survival. Those that had participated in the live fish market were especially knowledgeable in these procedures. The electric rod and reel gear is very efficient, and, under favorable conditions, produced little stress or damage to the fish when small-barbed single hooks were used. Ideal conditions appeared to be water temperatures below 50° F with no sharply defined thermocline and depths of 200 ft. or less. The captains also handled data collection with few problems, thanks in part to multiple hands-on training sessions and at-sea assistance and

observation. Although each of these operations had unique characteristics and operating methods, the oversight from the association provided standardization where necessary, and they were able to work within established parameters to meet the goals of the program. The most difficult aspect to coordinate was the geographical distribution of effort. The natural tendency is for the captains to want to go where the fish are most plentiful and closest to port at any particular time. In some instances it was necessary to direct them to other, more distant grounds with fewer fish to achieve the desired distribution, requiring close coordination and oversight. This would be difficult or impossible without a strong umbrella organization and contractual agreements with the vessels.

From the beginning, I was convinced that this project was the next logical step in collaborative research, allowing independent experimental work by fishermen with a minimum amount of government oversight. I am pleased that the project goals were achieved and reviewed favorably by the regional program, and believe that this project can serve as a model for future collaborative research involving organized fishermen.

Jim Fair

2. Dissemination of Project Results

The majority of the results dissemination in this project will take place in collaboration with the Level II coordinator and the program partners. Preliminary results are already available to the public and stakeholders through the program website www.codresearch.org and the accompanying online GIS mapping interface. As a greater percentage of the program data, both recapture and release, has passed through data entry, submission, and approval, the analyses and information presented by these tools has grown ever richer. These provide the main means of dissemination of project results at this time, and will continue to provide this to the public.

CCCHFA will also collaborate with the program partners in the preparation of a comprehensive paper on the deployment, data management and outreach segments of the project for publication in a suitable journal. This paper should not be confused with any analysis of actual movement and distribution results to be gleaned from recapture data, although CCCHFA may produce writings on this aspect with or without partner collaboration in the future.

CCCHFA has featured the program several times in the CCCHFA newsletter, *Hooked on Cod*, and in the 2003 and 2004 annual reports. A future edition of *Hooked on Cod* will review the program in its entirety.

CCCHFA has assisted local fishermen in their efforts to use the online mapping tool to study cod movements, through instruction and by providing confidential vessel codes to tagging boat captains. In addition, CCCHFA has long consulted the raw data to answer fishermen's queries about the origin of recaptures which were not yet in the program database. This has provided a vital link in the dissemination of project results, by affording real time movement and growth information to fishermen unable, unwilling or too impatient to wait for www.codresearch.org/codmapping to provide the information.

The Program Coordinator presented preliminary results on the deployment contract to a diverse cross section of community groups and fisheries conferences. The community groups include the Cape Cod Men's Club, 10th and 11th grade science classes at Nauset High School, the Harwich High School Career Fair, Chatham Retired Men's Club, the Cape Cod Museum of

Natural History, and others. In addition, the Program Controller presented a poster and discussion to the Cape Cod Salties, a recreational fishermen's group. The fisheries conferences include the Northeast Fish and Wildlife Conference (2003) and the 2nd Annual MA DMF Symposium on Sustainable Fisheries (2004).

The earned media secured by CCCHFA also served to disseminate project results. Print media included feature articles in the Cape Cod Times, Cape Cod Chronicle, and Cape Codder. The program was also featured on local (WCAI-NAN Cape and Islands NPR) and national (WCBS-Westwood One-ACF: The Osgood Files) radio broadcasts. In addition, the Program Coordinator joined Dr. John Hoey (NEFSC) on WCAI-NAN to discuss regional cooperative research including the NERCTP. CCCHFA also hosted WBZ-4, the Boston CBS affiliate, whose film crew and correspondent sailed on a dedicated trip aboard the FV Sadie and featured the program on the evening news.

Appendix A: Tagging Trip Log with Daily Costs

Sum of # Fish												
Tagged				Area							Grand	Estimated Daily
Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	1	2	3	4	5	GB	Total	Costs	
4/14/2003	Peggy B II	D	266	109						109	\$1,545	
	Peggy B II Total			109						109		
	Sea Wolf	D	231	142						142	\$1,710	
	Sea Wolf Total			142						142		
	Sue-Z	D	95	95						95	\$1,500	
	Sue-Z Total			95						95		
	Tenacious	ND	NA		78					78	\$540	
	Tenacious Total				78					78		
	Yellowbird	ND	NA		20					20	\$160	
	Yellowbird Total				20					20		
Zachary T	ND	NA			14				14	\$112		
Zachary T Total					14				14			
4/14/2003 Total				839	92					931		
4/15/2003	Sea Win	ND	NA				19			19	\$152	
	Sea Win Total						19			19		
4/15/2003 Total							19			19		
4/21/2003	Crystal Lee	D	158	120						120	\$1,600	
	Crystal Lee Total			120						120		
	Magic	D	144	117						117	\$1,585	
	Magic Total			117						117		
	Miss Dorothy	D	107	107						107	\$1,535	
	Miss Dorothy Total			107						107		
	Murrelet	D	119	45						45	\$1,225	
	Murrelet Total			45						45		
	Saga	D	114	114						114	\$1,570	
	Saga Total			114						114		
	Sea Wolf	D	206	132						132	\$1,660	
	Sea Wolf Total			132						132		
	Shalako	D	171	171						171	\$1,855	
	Shalako Total			171						171		
Tenacious	ND	NA			12				12	\$96		
Tenacious Total					12				12			
Yellowbird	ND	NA		20					20	\$160		
Yellowbird Total				20					20			
4/21/2003 Total				826	12					838		
4/22/2003	Crystal Lee	D	146	101						101	\$1,505	
	Crystal Lee Total			101						101		
	Magic	D	145	150						150	\$1,750	
	Magic Total			150						150		
	Miss Dorothy	D	105	100						100	\$1,500	
	Miss Dorothy Total			100						100		
	Peggy B II	D	228	113						113	\$1,565	
	Peggy B II Total			113						113		
	Saga	D	114	113						113	\$1,565	
	Saga Total			113						113		
	Sea Wolf	D	193	140						140	\$1,700	
	Sea Wolf Total			140						140		
	Shalako	D	137	102						102	\$1,510	
	Shalako Total			102						102		
	Sue-Z	D	107	118						118	\$1,590	
Sue-Z Total			118						118			
Yellowbird	ND	NA		20					20	\$160		
Yellowbird Total				20					20			
4/22/2003 Total				957						957		
4/23/2003	Mattanza	ND	NA	20						20	\$160	
	Mattanza Total			20						20		
	Saga	D	104	85						85	\$1,425	
	Saga Total			85						85		
	Sea Wolf	D	179			108				108	\$1,540	
	Sea Wolf Total					108				108		
4/23/2003 Total				105		108				213		
4/24/2003	Yellowbird	ND	NA	20						20	\$160	
	Yellowbird Total			20						20		
4/24/2003 Total				20						20		
4/25/2003	Crystal Lee	D	157			211				211	\$2,055	
	Crystal Lee Total					211				211		
	Glory K	D	114	116						116	\$1,580	
	Glory K Total			116						116		
	Magic	ND	145	23						23	\$184	
	Magic Total			23						23		
	Peggy B II	D	223		205					205	\$2,025	
Peggy B II Total				205					205			

Appendix A: Tagging Trip Log with Daily Costs

Sum of # Fish												
Tagged				Area							Grand Total	Estimated Daily Costs
Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	1	2	3	4	5	GB	Total		
4/25/2003	Saga	D	103	100						100	\$1,500	
	Saga Total			100						100		
	Shalako	D	136		135					135	\$1,675	
	Shalako Total				135					135		
	Yellowbird	ND	NA	20						20	\$160	
	Yellowbird Total			20						20		
4/25/2003 Total				259	340	211				810		
4/27/2003	Tenacious	ND	NA		20					20	\$160	
	Tenacious Total				20					20		
4/27/2003 Total					20					20		
4/28/2003	Crystal Lee	D	175			280				280	\$2,400	
	Crystal Lee Total					280				280		
	Miss Dorothy	D	105			105				105	\$1,525	
	Miss Dorothy Total					105				105		
	Peggy B II	D	206		118					118	\$1,590	
	Peggy B II Total				118					118		
	Saga	D	87	22						22	\$1,500	
	Saga Total			22						22		
	Shalako	D	128		103					103	\$1,515	
	Shalako Total				103					103		
	Sue-Z	D	101			91				91	\$1,455	
	Sue-Z Total					91				91		
	Yellowbird	ND	NA	20						20	\$160	
	Yellowbird Total			20						20		
	Zachary T	ND	NA		15					15	\$120	
	Zachary T Total				15					15		
4/28/2003 Total				42	236	476				754		
4/29/2003	Miss Dorothy	D	125			206				206	\$2,030	
	Miss Dorothy Total					206				206		
	Miss Morgan	D	223			223				223	\$2,115	
	Miss Morgan Total					223				223		
	Saga	D	81	49						49	\$1,500	
	Saga Total			49						49		
	Tenacious	ND	NA		25					25	\$200	
	Tenacious Total				25					25		
	Yellowbird	ND	NA	20						20	\$160	
	Yellowbird Total			20						20		
4/29/2003 Total				69	25	429				523		
4/30/2003	Crystal Lee	D	180			216				216	\$2,080	
	Crystal Lee Total					216				216		
	Miss Dorothy	D	125			123				123	\$1,615	
	Miss Dorothy Total					123				123		
	Miss Morgan	D	227			231				231	\$2,155	
	Miss Morgan Total					231				231		
	Saga	D	92			159				159	\$1,500	
	Saga Total					159				159		
	Shalako	D	132		148					148	\$1,740	
	Shalako Total				148					148		
	Sue-Z	D	135			236				236	\$2,180	
	Sue-Z Total					236				236		
	Surfbreaker	D	178			178				178	\$1,890	
	Surfbreaker Total					178				178		
	Tenacious	ND	NA		27					27	\$216	
	Tenacious Total				27					27		
4/30/2003 Total					175	1143				1318		
5/1/2003	Crystal Lee	D	168			78				78	\$1,390	
	Crystal Lee Total					78				78		
	Fiasco	D	34			34				34	\$1,500	
	Fiasco Total					34				34		
	Saga	D	94			106				106	\$1,500	
	Saga Total					106				106		
	Surfbreaker	D	100			22				22	\$1,500	
	Surfbreaker Total					22				22		
5/1/2003 Total						240				240		
5/2/2003	Miss Morgan	D	191			119				119	\$1,595	
	Miss Morgan Total					119				119		
5/2/2003 Total						119				119		
5/4/2003	Miss Morgan	D	182			156				156	\$1,780	
	Miss Morgan Total					156				156		
	Shalako	D	130		120					120	\$1,600	
	Shalako Total				120					120		
5/4/2003 Total					120	156				276		

Appendix A: Tagging Trip Log with Daily Costs

Sum of # Fish												
Tagged				Area							Grand Total	Estimated Daily Costs
Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	1	2	3	4	5	GB			
5/5/2003	Crystal Lee	D	165			133					133	\$1,665
	Crystal Lee Total					133					133	
	Fiasco	D	81			128					128	\$1,500
	Fiasco Total					128					128	
	Miss Dorothy	D	127			143					143	\$1,715
	Miss Dorothy Total					143					143	
	Miss Morgan	D	193			237					237	\$2,185
	Miss Morgan Total					237					237	
	Saga	D	99			145					145	\$1,500
	Saga Total					145					145	
	Sue-Z	D	135			136					136	\$1,680
	Sue-Z Total					136					136	
5/5/2003 Total						922					922	
5/6/2003	Saga	D	97			78					78	\$1,500
	Saga Total					78					78	
	Shannon and Cindy	D	0				0				0	\$1,500
	Shannon and Cindy Total						0				0	
5/6/2003 Total						78	0				78	
5/7/2003	Crystal Lee	D	163			147					147	\$1,735
	Crystal Lee Total					147					147	
	Fiasco	D	91			110					110	\$1,500
	Fiasco Total					110					110	
	Miss Morgan	D	203			250					250	\$2,250
	Miss Morgan Total					250					250	
	Saga	D	106			195					195	\$1,975
	Saga Total					195					195	
	Shalako	D	130		128						128	\$1,640
	Shalako Total				128						128	
	Surfbreaker	D	137			210					210	\$2,050
	Surfbreaker Total					210					210	
5/7/2003 Total						128	912				1040	
5/9/2003	Althea K	D	163			163					163	\$1,815
	Althea K Total					163					163	
	Crystal Lee	D	166			200					200	\$2,000
	Crystal Lee Total					200					200	
	Fiasco	D	114			185					185	\$1,925
	Fiasco Total					185					185	
	Sue-Z	D	144			187					187	\$1,935
	Sue-Z Total					187					187	
5/9/2003 Total						735					735	
5/10/2003	Althea K	D	149		134						134	\$1,670
	Althea K Total				134						134	
	Miss Melodye	D	69		69						69	\$1,500
	Miss Melodye Total				69						69	
	Miss Morgan	D	201		190						190	\$1,950
	Miss Morgan Total				190						190	
	Sue-Z	D	142		133						133	\$1,665
	Sue-Z Total				133						133	
	Surfbreaker	D	131		115						115	\$1,575
	Surfbreaker Total				115						115	
5/10/2003 Total						641					641	
5/11/2003	Fiasco	D	102		51						51	\$1,255
	Fiasco Total				51						51	
5/11/2003 Total						51					51	
5/14/2003	Althea K	D	148		148						148	\$1,740
	Althea K Total				148						148	
	Miss Melodye	D	86		103						103	\$1,500
	Miss Melodye Total				103						103	
	Surfbreaker	D	126		103						103	\$1,515
	Surfbreaker Total				103						103	
5/14/2003 Total						354					354	
5/19/2003	Althea K	D	172		243						243	\$2,215
	Althea K Total				243						243	
	Arlie eX	D	107		107						107	\$1,535
	Arlie eX Total				107						107	
	Booby Hatch	D	80		80						80	\$1,500
	Booby Hatch Total				80						80	
	Miss Melodye	D	83		77						77	\$1,500
	Miss Melodye Total				77						77	
	Surfbreaker	D	118		77						77	\$1,385
	Surfbreaker Total				77						77	
	William Gregory	D	73		73						73	\$1,500

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Sum of # Fish												Estimated Daily Costs
Tagged				Area							Grand Total	
Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	1	2	3	4	5	GB			
5/19/2003	William Gregory Total					73					73	
5/19/2003 Total												657
5/20/2003	Althea K	D	172			170					170	\$1,850
Althea K Total												170
	Arlie eX	D	124			140					140	\$1,700
Arlie eX Total												140
	Booby Hatch	D	124			168					168	\$1,840
Booby Hatch Total												168
	Miss Melodye	D	75			51					51	\$1,500
Miss Melodye Total												51
	Surfbreaker	D	116			107					107	\$1,535
Surfbreaker Total												107
	William Gregory	D	97			120					120	\$1,500
William Gregory Total												120
5/20/2003 Total												756
5/21/2003	Arlie eX	D	131			146					146	\$1,730
Arlie eX Total												146
	Booby Hatch	D	118			106					106	\$1,530
Booby Hatch Total												106
	Fiasco	D	98			82					82	\$1,500
Fiasco Total												82
	William Gregory	D	94			90					90	\$1,500
William Gregory Total												90
5/21/2003 Total												424
5/22/2003	Arlie eX	D	159			241					241	\$2,205
Arlie eX Total												241
	Fiasco	D	117			229					229	\$2,145
Fiasco Total												229
	Miss Melodye	D	110			248					248	\$2,240
Miss Melodye Total												248
5/22/2003 Total												477
5/28/2003	Sadie	D	348			348					348	\$2,740
Sadie Total												348
5/28/2003 Total												348
5/29/2003	Sadie	D	232			115					115	\$1,575
Sadie Total												115
5/29/2003 Total												115
5/30/2003	Althea K	D	196			320					320	\$2,600
Althea K Total												320
	Arlie eX	D	187			303					303	\$2,515
Arlie eX Total												303
	Frenzy	D	129			129					129	\$1,645
Frenzy Total												129
	Miss Melodye	D	112			121					121	\$1,605
Miss Melodye Total												121
	Sadie	D	199			135					135	\$1,675
Sadie Total												135
5/30/2003 Total												1008
6/3/2003	Booby Hatch	D	154			261					261	\$2,305
Booby Hatch Total												261
	Frenzy	D	137			144					144	\$1,720
Frenzy Total												144
	Sadie	D	208			234					234	\$2,170
Sadie Total												234
6/3/2003 Total												639
6/5/2003	Sadie	D	208			209					209	\$2,045
Sadie Total												209
6/5/2003 Total												209
6/6/2003	Sadie	D	200			159					159	\$1,795
Sadie Total												159
6/6/2003 Total												159
6/7/2003	Glory K	ND	114	20		159					159	\$160
Glory K Total												20
6/7/2003 Total												20
6/12/2003	Sadie	D	178			48					48	\$1,240
Sadie Total												48
6/12/2003 Total												48
6/16/2003	Ben Fishing	ND	NA	7		7					7	\$56
Ben Fishing Total												7
6/16/2003 Total												7
6/17/2003	Ben Fishing	ND	NA	3		3					3	\$24
Ben Fishing Total												3
6/17/2003 Total												3

Appendix A: Tagging Trip Log with Daily Costs

Sum of # Fish				Area							Grand Total	Estimated Daily Costs
Tagged Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	1	2	3	4	5	GB			
6/17/2003 Total					3						3	
6/19/2003	Blue Sky	ND	NA	21							21	\$168
Blue Sky Total					21						21	
6/19/2003 Total					21						21	\$160
6/23/2003	Ben Fishing	ND	NA	20							20	
Ben Fishing Total					20						20	
6/23/2003 Total					20						20	\$160
6/24/2003	Ben Fishing	ND	NA	20							20	
Ben Fishing Total					20						20	
6/24/2003 Total					20						20	\$104
6/25/2003	Ben Fishing	ND	NA	13							13	
Ben Fishing Total					13						13	
6/25/2003 Total					13						13	\$160
6/27/2003	Glory K	ND	114	20							20	
Glory K Total					20						20	
6/27/2003 Total					20						20	\$160
6/29/2003	Glory K	ND	114	20							20	
Glory K Total					20						20	
6/29/2003 Total					20						20	\$160
7/1/2003	Sea Win	ND	NA			20					20	
Sea Win Total						20					20	
7/1/2003 Total						20					20	\$160
7/3/2003	Sea Win	ND	NA			20					20	
Sea Win Total						20					20	
7/3/2003 Total						20					20	\$160
7/5/2003	Sea Win	ND	NA			20					20	
Sea Win Total						20					20	
7/5/2003 Total						20					20	\$160
7/6/2003	Sea Win	ND	NA			20					20	
Sea Win Total						20					20	
7/6/2003 Total						20					20	\$160
7/7/2003	Sadie	ND	178			20					20	
Sadie Total						20					20	
7/7/2003 Total						20					20	\$160
7/8/2003	Glory K	ND	114	20							20	
Glory K Total					20						20	
	Sadie	ND	178			10					10	\$80
Sadie Total						10					10	
7/8/2003 Total					20	10					30	
7/10/2003	Sadie	ND	178			10					10	\$80
Sadie Total						10					10	
7/10/2003 Total						10					10	\$152
7/12/2003	Sea Win	ND	NA			19					19	
Sea Win Total						19					19	
7/12/2003 Total						19					19	\$160
7/13/2003	Glory K	ND	114	20							20	
Glory K Total					20						20	
	Sea Win	ND	NA			21					21	\$168
Sea Win Total						21					21	
7/13/2003 Total					20	21					41	\$160
7/14/2003	Sea Win	ND	NA			20					20	
Sea Win Total						20					20	
7/14/2003 Total						20					20	\$184
7/15/2003	Sea Win	ND	NA			23					23	
Sea Win Total						23					23	
7/15/2003 Total						23					23	\$136
7/17/2003	Sea Win	ND	NA			17					17	
Sea Win Total						17					17	
7/17/2003 Total						17					17	\$160
7/18/2003	Glory K	ND	114	20							20	
Glory K Total					20						20	
	Sadie	ND	178	12							12	\$96
Sadie Total					12						12	
	Sea Win	ND	NA			20					20	\$160
Sea Win Total						20					20	
7/18/2003 Total					32	20					52	\$192
7/19/2003	Blue Sky	ND	NA	24							24	
Blue Sky Total					24						24	
7/19/2003 Total					24						24	\$160
7/20/2003	Glory K	ND	114			20					20	
Glory K Total						20					20	
	Sea Win	ND	NA			20					20	\$160

Appendix A: Tagging Trip Log with Daily Costs

Sum of # Fish												Estimated Daily Costs		
Tagged				Area										
Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	1	2	3	4	5	GB	Grand Total				
7/20/2003 Sea Win Total											20			
7/20/2003 Total											20			
7/21/2003 Sea Win											19			
7/21/2003 Sea Win Total											19	\$152		
7/21/2003 Total											19			
7/25/2003 Sea Win											19			
7/25/2003 Sea Win Total											20	\$160		
7/25/2003 Total											20			
7/26/2003 Glory K											114	20		
7/26/2003 Glory K Total											20	\$160		
7/26/2003 Sadie											178	20		
7/26/2003 Sadie Total											20	\$160		
7/26/2003 Sea Win											18	20		
7/26/2003 Sea Win Total											18	\$144		
7/26/2003 Total											18			
7/29/2003 Ben Fishing											20	38		
7/29/2003 Ben Fishing Total											8	8	\$64	
7/29/2003 Glory K											114	20		
7/29/2003 Glory K Total											20	\$160		
7/29/2003 Sadie											178	13		
7/29/2003 Sadie Total											13	\$104		
7/29/2003 Snug Harbor Express											NA	13		
7/29/2003 Snug Harbor Express Total											9	9	\$72	
7/29/2003 Total											9			
7/30/2003 Gail Frances											28	13	9	
7/30/2003 Gail Frances Total											25	25	\$200	
7/30/2003 Total											25			
8/6/2003 Gail Frances											NA	13		
8/6/2003 Gail Frances Total											13	13	\$104	
8/6/2003 Total											13			
8/13/2003 Susan Lee											NA	20		
8/13/2003 Susan Lee Total											20	20	\$160	
8/13/2003 Total											20			
8/20/2003 Sea Win											NA	20		
8/20/2003 Sea Win Total											20	20	\$160	
8/20/2003 Total											20			
8/25/2003 Sea Holly											NA	2		
8/25/2003 Sea Holly Total											2	2	\$16	
8/25/2003 Total											2			
8/27/2003 Blue Sky											46	20		
8/27/2003 Blue Sky Total											46	46	\$368	
8/27/2003 Sea Win											NA	20		
8/27/2003 Sea Win Total											20	20	\$160	
8/27/2003 Total											20			
8/28/2003 Glory K											114	20		
8/28/2003 Glory K Total											20	20	\$160	
8/28/2003 Sadie											178	20		
8/28/2003 Sadie Total											20	20	\$160	
8/28/2003 Susan Lee											NA	20		
8/28/2003 Susan Lee Total											20	20	\$160	
8/28/2003 Total											20			
8/29/2003 Sadie											178	40		
8/29/2003 Sadie Total											20	20	\$160	
8/29/2003 Susan Lee											NA	21		
8/29/2003 Susan Lee Total											21	21	\$168	
8/29/2003 Total											21			
8/30/2003 Susan Lee											NA	41		
8/30/2003 Susan Lee Total											24	24	\$192	
8/30/2003 Total											24			
9/1/2003 Glory K											114	20		
9/1/2003 Glory K Total											20	20	\$160	
9/1/2003 Sadie											178	20		
9/1/2003 Sadie Total											20	20	\$160	
9/1/2003 Sea Holly											NA	2		
9/1/2003 Sea Holly Total											2	2	\$16	
9/1/2003 Susan Lee											NA	88		
9/1/2003 Susan Lee Total											88	88	\$590	
9/1/2003 Total											88			
9/2/2003 Susan Lee											20	2	108	
9/2/2003 Susan Lee Total											82	82	\$560	
9/2/2003 Total											82			
9/4/2003 Sea Holly											NA	2		
9/4/2003 Sea Holly Total											2	2	\$16	
9/4/2003 Total											2			

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Sum of # Fish				Area							Grand Total	Estimated Daily Costs
Tagged Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	1	2	3	4	5	GB			
9/4/2003	Sea Holly Total				2					2		
	Susan Lee	ND	NA	15						15	\$120	
	Susan Lee Total			15						15		
9/4/2003 Total				15	2					17		
9/6/2003	Sea Holly	ND	NA			3				3	\$24	
	Sea Holly Total					3				3		
9/6/2003 Total					3					3		
9/8/2003	Susan Lee	ND	NA	20						20	\$160	
	Susan Lee Total			20						20		
9/8/2003 Total				20						20		
9/10/2003	Susan Lee	ND	NA	15						15	\$120	
	Susan Lee Total			15						15		
9/10/2003 Total				15						15		
9/11/2003	Sea Win	ND	NA			7				7	\$56	
	Sea Win Total					7				7		
	Susan Lee	ND	NA	26						26	\$208	
	Susan Lee Total			26						26		
9/11/2003 Total				26		7				33		
9/12/2003	Sea Holly	ND	NA			2				2	\$16	
	Sea Holly Total					2				2		
	Susan Lee	ND	NA	2						2	\$16	
	Susan Lee Total			2						2		
9/12/2003 Total				2	2					4		
9/13/2003	Susan Lee	ND	NA	1						1	\$8	
	Susan Lee Total			1						1		
9/13/2003 Total				1						1		
9/16/2003	Susan Lee	ND	NA	43						43	\$344	
	Susan Lee Total			43						43		
9/16/2003 Total				43						43		
9/17/2003	Sea Win	ND	NA			20				20	\$160	
	Sea Win Total					20				20		
9/17/2003 Total						20				20		
9/21/2003	Mattanza	ND	NA			11				11	\$88	
	Mattanza Total					11				11		
	Susan Lee	ND	NA	32						32	\$256	
	Susan Lee Total			32						32		
9/21/2003 Total				32		11				43		
9/22/2003	Glory K	ND		114	20					20	\$160	
	Glory K Total			20	20					20		
	Sea Holly	ND	NA			1				1	\$8	
	Sea Holly Total					1				1		
	Sea Win	ND	NA			20				20	\$160	
	Sea Win Total					20				20		
	Susan Lee	ND	NA	14						14	\$112	
	Susan Lee Total			14						14		
9/22/2003 Total				34	1	20				55		
9/24/2003	Sea Win	ND	NA			20				20	\$160	
	Sea Win Total					20				20		
	Susan Lee	ND	NA	21						21	\$168	
	Susan Lee Total			21						21		
9/24/2003 Total				21		20				41		
9/25/2003	Sea Win	ND	NA			20				20	\$160	
	Sea Win Total					20				20		
	Susan Lee	ND	NA	16						16	\$128	
	Susan Lee Total			16						16		
9/25/2003 Total				16		20				36		
9/26/2003	Glory K	ND		114	20					20	\$160	
	Glory K Total			20	20					20		
	Sea Holly	ND	NA			1				1	\$8	
	Sea Holly Total					1				1		
	Sea Win	ND	NA			11				11	\$88	
	Sea Win Total					11				11		
	Susan Lee	ND	NA	14						14	\$112	
	Susan Lee Total			14						14		
9/26/2003 Total				34	1	11				46		
9/27/2003	Susan Lee	ND	NA	40						40	\$320	
	Susan Lee Total			40						40		
9/27/2003 Total				40						40		
9/30/2003	Susan Lee	ND	NA	20						20	\$160	
	Susan Lee Total			20						20		
9/30/2003 Total				20						20		
10/1/2003	Susan Lee	ND	NA	20						20	\$160	

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Sum of # Fish Tagged				Area							Grand Total	Estimated Daily Costs
Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	1	2	3	4	5	GB			
10/1/2003	Susan Lee Total			20							20	
10/1/2003	Total			20							20	
10/5/2003	Sea Win	ND	NA			20					20	\$160
	Sea Win Total					20					20	
10/5/2003	Total					20					20	
10/6/2003	Mattanza	ND	NA		18						18	\$144
	Mattanza Total				18						18	
	Sea Holly	ND	NA		1						1	\$8
	Sea Holly Total				1						1	
10/6/2003	Total				19						19	
10/9/2003	Sea Win	ND	NA			20					20	\$160
	Sea Win Total					20					20	
10/9/2003	Total					20					20	
10/15/2003	Mattanza	ND	NA			4					4	\$32
	Mattanza Total					4					4	
10/15/2003	Total					4					4	
10/19/2003	Susan Lee	ND	NA			23					23	\$184
	Susan Lee Total					23					23	
10/19/2003	Total					23					23	
10/25/2003	Sue-Z	ND	142		20						20	\$160
	Sue-Z Total				20						20	
10/25/2003	Total				20						20	
10/31/2003	Sue-Z	ND	142		20						20	\$160
	Sue-Z Total				20						20	
10/31/2003	Total				20						20	
11/2/2003	Sue-Z	ND	142		20						20	\$160
	Sue-Z Total				20						20	
11/2/2003	Total				20						20	
11/3/2003	Mattanza	ND	NA		10						10	\$80
	Mattanza Total				10						10	
	Surfbreaker	ND	116			20					20	\$160
	Surfbreaker Total					20					20	
11/3/2003	Total				10	20					30	
11/4/2003	Surfbreaker	ND	116		18						18	\$144
	Surfbreaker Total				18						18	
11/4/2003	Total				18						18	
11/6/2003	Surfbreaker	ND	116			20					20	\$160
	Surfbreaker Total					20					20	
11/6/2003	Total					20					20	
11/7/2003	Sue-Z	ND	142		20						20	\$160
	Sue-Z Total				20						20	
	Surfbreaker	ND	116		16						16	\$128
	Surfbreaker Total				16						16	
11/7/2003	Total				16	20					36	
11/11/2003	Surfbreaker	ND	116			20					20	\$160
	Surfbreaker Total					20					20	
	Zekka	ND	NA		8						8	\$64
	Zekka Total				8						8	
11/11/2003	Total				8	20					28	
11/17/2003	Headhunter	ND	NA		20						20	\$160
	Headhunter Total				20						20	
	Sea Wolf	ND	179		40						40	\$320
	Sea Wolf Total				40						40	
	Sue-Z	ND	142		20						20	\$160
	Sue-Z Total				20						20	
11/17/2003	Total				80						80	
11/18/2003	Headhunter	ND	NA		20						20	\$160
	Headhunter Total				20						20	
	Sea Wolf	ND	179		40						40	\$320
	Sea Wolf Total				40						40	
	Surfbreaker	ND	116		20						20	\$160
	Surfbreaker Total				20						20	
	Tenacious	ND	NA		20						20	\$160
	Tenacious Total				20						20	
11/18/2003	Total				100						100	
11/24/2003	Sea Win	ND	NA			20					20	\$160
	Sea Win Total					20					20	
	Sue-Z	ND	142		36						36	\$288
	Sue-Z Total				36						36	
	Tenacious	ND	NA		18						18	\$144
	Tenacious Total				18						18	
	Yellowbird	ND	NA			20					20	\$160

Appendix A: Tagging Trip Log with Daily Costs

Sum of # Fish Tagged				Area						Grand Total	Estimated Daily Costs
Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	1	2	3	4	5	GB		
11/24/2003	Yellowbird Total					20				20	
	Zachary T	ND	NA		20					20	\$160
	Zachary T Total				20					20	
11/24/2003 Total					74	40				114	
11/26/2003	Sea Win	ND	NA				20			20	\$160
	Sea Win Total						20			20	
	Tenacious	ND	NA		20					20	\$160
	Tenacious Total				20					20	
	Yellowbird	ND	NA					50		50	\$400
	Yellowbird Total							50		50	
	Zachary T	ND	NA		20					20	\$160
	Zachary T Total				20					20	
11/26/2003 Total					40	70				110	
12/4/2003	Yellowbird	ND	NA					21		21	\$168
	Yellowbird Total							21		21	
12/4/2003 Total								21		21	
12/5/2003	Sea Win	ND	NA				13			13	\$104
	Sea Win Total						13			13	
	Sea Wolf	ND	179					20		20	\$160
	Sea Wolf Total							20		20	
	Zachary T	ND	NA		20					20	\$160
	Zachary T Total				20					20	
12/5/2003 Total					20	33				53	
12/10/2003	Snug Harbor Express	ND	NA					13		13	\$104
	Snug Harbor Express Total							13		13	
	Surfbreaker	ND	116				15			15	\$120
	Surfbreaker Total						15			15	
12/10/2003 Total							15	13		28	
12/11/2003	Zachary T	ND	NA			1				1	\$8
	Zachary T Total					1				1	
12/11/2003 Total						1				1	
12/19/2003	Yellowbird	ND	NA		50					50	\$400
	Yellowbird Total				50					50	
12/19/2003 Total					50					50	
12/20/2003	Magic	D	134		72					72	\$1,360
	Magic Total				72					72	
12/20/2003 Total					72					72	
12/23/2003	Magic	D	131		108					108	\$1,540
	Magic Total				108					108	
	Yellowbird	ND	NA					50		50	\$400
	Yellowbird Total							50		50	
12/23/2003 Total					108	50				158	
12/28/2003	Magic	D	128		99					99	\$1,495
	Magic Total				99					99	
	Sea Holly	ND	NA				16			16	\$128
	Sea Holly Total						16			16	
	Sea Wolf	D	158		33					33	\$1,165
	Sea Wolf Total				33					33	
12/28/2003 Total					132		16			148	
12/29/2003	Glory K	D	107		57					57	\$1,285
	Glory K Total				57					57	
	Magic	D	125		100					100	\$1,500
	Magic Total				100					100	
12/29/2003 Total					157					157	
1/2/2004	Glory K	D	106		100					100	\$1,500
	Glory K Total				100					100	
	Magic	D	124		118					118	\$1,590
	Magic Total				118					118	
	Sea Holly	ND	NA				50			50	\$400
	Sea Holly Total						50			50	
	Sea Wolf	D	159		169					169	\$1,845
	Sea Wolf Total				169					169	
	Yellowbird	ND	NA				50			50	\$400
	Yellowbird Total						50			50	
1/2/2004 Total					387		100			487	
1/3/2004	Magic	D	122		92					92	\$1,460
	Magic Total				92					92	
	Sea Holly	ND	NA				40			40	\$320
	Sea Holly Total						40			40	
	Sea Wolf	D	152		96					96	\$1,480
	Sea Wolf Total				96					96	
	Yellowbird	ND	NA				50			50	\$400

Appendix A: Tagging Trip Log with Daily Costs

Sum of # Fish												
Tagged				Area								Estimated Daily Costs
Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	1	2	3	4	5	GB	Grand Total		
1/3/2004 Yellowbird Total										50		
1/3/2004 Total										50		
1/4/2004 Headhunter				107	188	90				278		
1/4/2004 Headhunter Total					138					138	\$1,690	
1/4/2004 Yellowbird										50		
1/4/2004 Yellowbird Total										50	\$400	
1/4/2004 Total					138	50				188		
1/11/2004 Sea Holly										50		
1/11/2004 Sea Holly Total										50	\$400	
1/11/2004 Total										50		
1/12/2004 Sea Holly										40		
1/12/2004 Sea Holly Total										40	\$320	
1/12/2004 Yellowbird										40		
1/12/2004 Yellowbird Total										50	\$400	
1/12/2004 Total										50		
1/13/2004 Yellowbird										90		
1/13/2004 Yellowbird Total					62					62	\$460	
1/13/2004 Total					62					62		
1/18/2004 Yellowbird										45		
1/18/2004 Yellowbird Total										45	\$360	
1/18/2004 Total										45		
1/22/2004 Saga				111	167					167		
1/22/2004 Saga Total					167					167	\$1,835	
1/22/2004 Total					167					167		
2/2/2004 Magic				122	124					124		
2/2/2004 Magic Total					124					124	\$1,620	
2/2/2004 Saga				115	160					160		
2/2/2004 Saga Total					160					160	\$1,800	
2/2/2004 Total					284					284		
2/3/2004 Glory K				106	100					100		
2/3/2004 Glory K Total					100					100	\$1,500	
2/3/2004 Magic				122	120					120		
2/3/2004 Magic Total					120					120	\$1,600	
2/3/2004 Saga				116	133					133		
2/3/2004 Saga Total					133					133	\$1,665	
2/3/2004 Total					353					353		
2/10/2004 Riena Marie										38		
2/10/2004 Riena Marie Total					38					38	\$304	
2/10/2004 Tenacious										33		
2/10/2004 Tenacious Total										33	\$264	
2/10/2004 Total					38	33				71		
2/12/2004 Glory K				100	47					47		
2/12/2004 Glory K Total					47					47	\$1,235	
2/12/2004 Riena Marie										45		
2/12/2004 Riena Marie Total										45	\$360	
2/12/2004 Surfbreaker				115	108					108		
2/12/2004 Surfbreaker Total					108					108	\$1,540	
2/12/2004 Total					200					200		
2/20/2004 Murrulet				106	1					1		
2/20/2004 Murrulet Total					1					1	\$1,005	
2/20/2004 Total					1					1		
2/24/2004 Murrulet				95						0		
2/24/2004 Murrulet Total										0	\$1,500	
2/24/2004 Saga				109	6					6		
2/24/2004 Saga Total					6					6	\$1,030	
2/24/2004 Surfbreaker				116	127					127		
2/24/2004 Surfbreaker Total					127					127	\$1,635	
2/24/2004 Tenacious										31		
2/24/2004 Tenacious Total										31	\$248	
2/24/2004 Total					133	31	0			164		
2/29/2004 Glory K				96	53					53		
2/29/2004 Glory K Total					53					53	\$1,500	
2/29/2004 Murrulet				88	13					13		
2/29/2004 Murrulet Total					13					13	\$1,500	
2/29/2004 Surfbreaker				112	71					71		
2/29/2004 Surfbreaker Total					71					71	\$1,355	
2/29/2004 Tenacious										50		
2/29/2004 Tenacious Total										50	\$400	
2/29/2004 Total					137	50				187		
3/1/2004 Magic				119	87					87		
3/1/2004 Magic Total					87					87	\$1,435	
3/1/2004 Total					87					87		

Appendix A: Tagging Trip Log with Daily Costs

Sum of # Fish Tagged				Area							Grand Total	Estimated Daily Costs
Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	1	2	3	4	5	GB			
3/4/2004	Murrulet	D	81	9						9	\$1,500	
	Murrulet Total			9						9		
	Tenacious	ND	NA		16					16	\$128	
	Tenacious Total				16					16		
3/4/2004 Total				9	16					25		
3/14/2004	Murrulet	D	75	0						0	\$1,500	
	Murrulet Total			0						0		
3/14/2004 Total				0						0		
3/24/2004	Lady Frances	ND	NA					22		22	\$176	
	Lady Frances Total							22		22		
3/24/2004 Total								22		22		
3/25/2004	Surfbreaker	D	102	0						0	\$1,000	
	Surfbreaker Total			0						0		
3/25/2004 Total				0						0		
3/31/2004	Tenacious	ND	NA		11					11	\$88	
	Tenacious Total				11					11		
3/31/2004 Total					11					11		
4/3/2004	Lady Frances	ND	NA					5		5	\$40	
	Lady Frances Total							5		5		
4/3/2004 Total								5		5		
4/10/2004	Breakaway	D	16					16		16	\$1,500	
	Breakaway Total							16		16		
4/10/2004 Total								16		16		
4/18/2004	Magic	D	118	92						92	\$1,460	
	Magic Total			92						92		
	Saga	D	109	109						109	\$1,545	
	Saga Total			109						109		
4/18/2004 Total				201						201		
4/21/2004	Glory K	D	91	22						22	\$1,500	
	Glory K Total			22						22		
	Murrulet	D	79	136						136	\$1,500	
	Murrulet Total			136						136		
	Peggy B II	D	191	100						100	\$1,500	
	Peggy B II Total			100						100		
	Saga	D	106	57						57	\$1,285	
	Saga Total			57						57		
	Sea Wolf	D	150	130						130	\$1,650	
	Sea Wolf Total			130						130		
	Sue-Z	D	139	115						115	\$1,575	
	Sue-Z Total			115						115		
	Surfbreaker	D	103	117						117	\$1,585	
	Surfbreaker Total			117						117		
4/21/2004 Total				677						677		
4/22/2004	Sea Wolf	D	138	15						15	\$1,075	
	Sea Wolf Total			15						15		
4/22/2004 Total				15						15		
4/24/2004	Surfbreaker	D	109	177						177	\$1,885	
	Surfbreaker Total			177						177		
4/24/2004 Total				177						177		
4/25/2004	Gail Frances	ND	NA					50		50	\$400	
	Gail Frances Total							50		50		
4/25/2004 Total								50		50		
4/27/2004	Headhunter	D	79	79						79	\$1,500	
	Headhunter Total			79						79		
	Murrulet	D	80	86						86	\$1,500	
	Murrulet Total			86						86		
	Peggy B II	D	179	100						100	\$1,500	
	Peggy B II Total			100						100		
	Saga	D	106	101						101	\$1,505	
	Saga Total			101						101		
	Sea Wolf	D	137	125						125	\$1,625	
	Sea Wolf Total			125						125		
	Sue-Z	D	139	140						140	\$1,700	
	Sue-Z Total			140						140		
	Surfbreaker	D	111	146						146	\$1,730	
	Surfbreaker Total			146						146		
4/27/2004 Total				777						777		
4/28/2004	Peggy B II	D	160	3						3	\$1,015	
	Peggy B II Total			3						3		
	Saga	D	100	5						5	\$1,025	
	Saga Total			5						5		
	Sea Wolf	D	129	32						32	\$1,160	

Appendix A: Tagging Trip Log with Daily Costs

Sum of # Fish											Estimated Daily Costs
Tagged				Area							
Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	1	2	3	4	5	GB	Grand Total	
4/28/2004	Sea Wolf Total			32						32	
4/28/2004 Total				40						40	
4/29/2004	Frenzy	D	111	60						60	\$1,300
	Frenzy Total			60						60	
	Headhunter	D	77	75						75	\$1,500
	Headhunter Total			75						75	
	Murrelet	D	79	64						64	\$1,500
	Murrelet Total			64						64	
	Saga	D	101	111						111	\$1,555
	Saga Total			111						111	
	Sea Wolf	D	125	75						75	\$1,375
	Sea Wolf Total			75						75	
4/29/2004 Total	Surfbreaker	D	110	96						96	\$1,480
	Surfbreaker Total			96						96	
4/29/2004 Total				481						481	
4/30/2004	Saga	D	100	83						83	\$1,500
	Saga Total			83						83	
4/30/2004 Total				83						83	
5/1/2004	Frenzy	D	99	62						62	\$1,500
	Frenzy Total			62						62	
	Gail Frances	ND	NA					11		11	\$88
	Gail Frances Total							11		11	
	Glory K	D	91	88						88	\$1,500
	Glory K Total			88						88	
	Sea Wolf	D	123	95						95	\$1,475
	Sea Wolf Total			95						95	
	Surfbreaker	D	108	70						70	\$1,350
	Surfbreaker Total			70						70	
5/1/2004 Total				315				11		326	
5/2/2004	Gail Frances	ND	NA					4		4	\$32
	Gail Frances Total							4		4	
5/2/2004 Total								4		4	
5/5/2004	Brandi Ellen II	ND	NA	36						36	\$288
	Brandi Ellen II Total			36						36	
	Glory K	D	90	80						80	\$1,500
	Glory K Total			80						80	
	Murrelet	ND (M)	79	53						53	
	Murrelet Total			53						53	
	Shalako	D	124	84						84	\$1,420
	Shalako Total			84						84	
	Sue-Z	D	132	64						64	\$1,320
	Sue-Z Total			64						64	
5/5/2004 Total	Surfbreaker	D	105	60						60	\$1,300
	Surfbreaker Total			60						60	
5/5/2004 Total				377						377	
5/6/2004	Headhunter	D	86	104						104	\$1,500
	Headhunter Total			104						104	
	Shalako	D	122	108						108	\$1,540
	Shalako Total			108						108	
	Sue-Z	D	129	102						102	\$1,510
	Sue-Z Total			102						102	
5/6/2004 Total				314						314	
5/10/2004	Brandi Ellen II	ND	NA	51						51	\$405
	Brandi Ellen II Total			51						51	
	Headhunter	D	76	46						46	\$1,500
	Headhunter Total			46						46	
5/10/2004 Total				97						97	
5/12/2004	Arlie eX	D	196	239						239	\$2,195
	Arlie eX Total			239						239	
	Sue-Z	D	128	120						120	\$1,600
5/12/2004 Total				120						120	
5/13/2004	Arlie eX	D	187	134						134	\$1,670
	Arlie eX Total			134						134	
	Shalako	D	121	107						107	\$1,535
	Shalako Total			107						107	
5/13/2004 Total				241						241	
5/14/2004	Arlie eX	D	194	245						245	\$2,225
	Arlie eX Total			245						245	
	Brandi Ellen II	ND	NA	50						50	\$400
	Brandi Ellen II Total			50						50	
	Peggy B II	D	160	166						166	\$1,830

Appendix A: Tagging Trip Log with Daily Costs

Sum of # Fish											Estimated Daily Costs	
Tagged				Area						Grand Total		
Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	1	2	3	4	5	GB			
5/14/2004	Peggy B II Total				166						166	
	Shalako	D	127		196						196	\$1,980
	Shalako Total				196						196	
	Sue-Z	D	131		160						160	\$1,800
	Sue-Z Total				160						160	
5/14/2004 Total					50	767					817	
5/15/2004	Frenzy	D	104		127						127	\$1,635
	Frenzy Total				127						127	
	Peggy B II	D	155		103						103	\$1,515
	Peggy B II Total				103						103	
	Shalako	D	125		101						101	\$1,505
	Shalako Total				101						101	
5/15/2004 Total					331						331	
5/16/2004	Fiasco	D	117		120						120	\$1,600
	Fiasco Total				120						120	
	Frenzy	D	119		190						190	\$1,950
	Frenzy Total				190						190	
	Magic	D	117		108						108	\$1,540
	Magic Total				108						108	
	Miss Morgan	D	205		233						233	\$2,165
	Miss Morgan Total				233						233	
	Peggy B II	D	159		198						198	\$1,990
	Peggy B II Total				198						198	
	Shalako	D	126		140						140	\$1,700
	Shalako Total				140						140	
	William Gregory	D	102		125						125	\$1,625
	William Gregory Total				125						125	
5/16/2004 Total					1114						1114	
5/17/2004	Arlie eX	D	193		184						184	\$1,920
	Arlie eX Total				184						184	
	Brandi Ellen II	ND	NA		55						55	\$425
	Brandi Ellen II Total				55						55	
	Fiasco	D	121		149						149	\$1,745
	Fiasco Total				149						149	
	Frenzy	D	127		180						180	\$1,900
	Frenzy Total				180						180	
	Headhunter	D	102		204						204	\$2,020
	Headhunter Total				204						204	
	Miss Dorothy	D	131		155						155	\$1,775
	Miss Dorothy Total				155						155	
	Miss Morgan	D	217		318						318	\$2,590
	Miss Morgan Total				318						318	
	Peggy B II	D	156		120						120	\$1,600
	Peggy B II Total				120						120	
	Sea Wolf	D	129		217						217	\$2,085
	Sea Wolf Total				217						217	
	William Gregory	D	111		146						146	\$1,730
	William Gregory Total				146						146	
5/17/2004 Total					55	1673					1728	
5/18/2004	Frenzy	D	129		139						139	\$1,695
	Frenzy Total				139						139	
	Headhunter	D	109		147						147	\$1,735
	Headhunter Total				147						147	
	Peggy B II	D	168		328						328	\$2,640
	Peggy B II Total				328						328	
	Wendy Jean	D	116		116						116	\$1,580
	Wendy Jean Total				116						116	
	William Gregory	D	113		123						123	\$1,615
	William Gregory Total				123						123	
5/18/2004 Total					853						853	
5/19/2004	Arlie eX	D	213		386						386	\$2,930
	Arlie eX Total				386						386	
	Miss Dorothy	D	155		348						348	\$2,740
	Miss Dorothy Total				348						348	
	Miss Morgan	D	223		277						277	\$2,385
	Miss Morgan Total				277						277	
	William Gregory	D	122		176						176	\$1,880
	William Gregory Total				176						176	
5/19/2004 Total					1187						1187	
5/20/2004	Arlie eX	D	232		429						429	\$3,145
	Arlie eX Total				429						429	
	Brandi Ellen II	ND	NA		48						48	\$384

Appendix A: Tagging Trip Log with Daily Costs

Sum of # Fish											Estimated Daily Costs
Tagged				Area							
Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	1	2	3	4	5	GB	Grand Total	
5/20/2004	Brandi Ellen II Total			48						48	
	Frenzy	D	153		343					343	\$2,715
	Frenzy Total				343					343	
	Glory K	D	90	94						94	\$1,500
	Glory K Total			94						94	
	Miss Dorothy	D	153		138					138	\$1,690
	Miss Dorothy Total				138					138	
	Miss Morgan	D	237		369					369	\$2,845
	Miss Morgan Total				369					369	
	Wendy Jean	D	156		195					195	\$1,975
	Wendy Jean Total				195					195	
	William Gregory	D	118		93					93	\$1,465
	William Gregory Total				93					93	
5/20/2004 Total				142	1567					1709	
5/21/2004	Arlie eX	D	222		115					115	\$1,575
	Arlie eX Total				115					115	
	Bad Seed	D	85			85				85	\$1,500
	Bad Seed Total					85				85	
	Fiasco	D	127		183					183	\$1,915
	Fiasco Total				183					183	
	Frenzy	D	166		287					287	\$2,435
	Frenzy Total				287					287	
	Headhunter	D	125		217					217	\$2,085
	Headhunter Total				217					217	
	Miss Dorothy	D	149		109					109	\$1,545
	Miss Dorothy Total				109					109	
	Miss Morgan	D	230		152					152	\$1,760
	Miss Morgan Total				152					152	
	Peggy B II	D	177		298					298	\$2,490
	Peggy B II Total				298					298	
	Shalako	D	131		189					189	\$1,945
	Shalako Total				189					189	
	Wendy Jean	D	161		173					173	\$1,865
	Wendy Jean Total				173					173	
	William Gregory	D	125		178					178	\$1,890
	William Gregory Total				178					178	
	Zachary T	ND	NA		50					50	\$400
	Zachary T Total				50					50	
5/21/2004 Total					1951	85				2036	
5/22/2004	Lady Frances	ND	NA						89	89	\$595
	Lady Frances Total								89	89	
5/22/2004 Total									89	89	
5/23/2004	Miss Morgan	D	226		182					182	\$1,910
	Miss Morgan Total				182					182	
	Shalako	D	138		238					238	\$2,190
	Shalako Total				238					238	
	Sue-Z	D	128		100					100	\$1,500
	Sue-Z Total				100					100	
	William Gregory	D	126		139					139	\$1,695
	William Gregory Total				139					139	
5/23/2004 Total					659					659	
5/24/2004	Headhunter	D	110			5				5	\$1,025
	Headhunter Total					5				5	
	Miss Morgan	D	217			105				105	\$1,525
	Miss Morgan Total					105				105	
	Wendy Jean	D	122			5				5	\$1,025
	Wendy Jean Total					5				5	
	William Gregory	D	115			7				7	\$1,035
	William Gregory Total					7				7	
5/24/2004 Total						122				122	
5/27/2004	Last Chance	D	91						91	91	\$1,500
	Last Chance Total								91	91	
	Miss Dorothy	D	145		100					100	\$1,500
	Miss Dorothy Total				100					100	
	Sorry Charlie	D	36						36	36	\$1,500
	Sorry Charlie Total								36	36	
	Wendy Jean	D	98		2					2	\$1,500
	Wendy Jean Total				2					2	
5/27/2004 Total					102			127		229	
5/28/2004	Alicia Ann	D	95		95					95	\$1,500
	Alicia Ann Total				95					95	
	Lady Frances	ND	NA						63	63	\$465

Appendix A: Tagging Trip Log with Daily Costs

Sum of # Fish Tagged												Estimated Daily Costs
Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	Area						GB	Grand Total	
				1	2	3	4	5				
5/28/2004	Lady Frances Total							63			63	
	Last Chance	D	98					105			105	\$1,500
	Last Chance Total							105			105	
	Shalako	D	136		100						100	\$1,500
	Shalako Total				100						100	
	Sorry Charlie	D	47					58			58	\$1,500
	Sorry Charlie Total							58			58	
5/28/2004 Total					195			226			421	
5/30/2004	Sea Holly	D	103		103						103	\$1,515
	Sea Holly Total				103						103	
5/30/2004 Total					103						103	
5/31/2004	Last Chance	D	96					92			92	\$1,500
	Last Chance Total							92			92	
5/31/2004 Total								92			92	
6/2/2004	Last Chance	D	95					93			93	\$1,500
	Last Chance Total							93			93	
6/2/2004 Total								93			93	
6/5/2004	Ben Fishing	ND	NA	8							8	\$64
	Ben Fishing Total			8							8	
6/5/2004 Total				8							8	
6/8/2004	Althea K	D	183			106					106	\$1,530
	Althea K Total					106					106	
	Last Chance	D	91					72			72	\$1,500
	Last Chance Total							72			72	
	Sorry Charlie	D	38					20			20	\$1,500
	Sorry Charlie Total							20			20	
6/8/2004 Total						106		92			198	
6/9/2004	Althea K	D	172			92					92	\$1,460
	Althea K Total					92					92	
	Wendy Jean	D	86		24						24	\$1,500
	Wendy Jean Total				24						24	
6/9/2004 Total					24	92					116	
6/10/2004	Bad Seed	D	93			100					100	\$1,500
	Bad Seed Total					100					100	
6/10/2004 Total						100					100	
6/11/2004	Althea K	D	165			106					106	\$1,530
	Althea K Total					106					106	
	Wendy Jean	D	88			99					99	\$1,500
	Wendy Jean Total					99					99	
6/11/2004 Total						205					205	
6/12/2004	Althea K	D	158			99					99	\$1,495
	Althea K Total					99					99	
	Time Bandit	D	150		150						150	\$1,750
	Time Bandit Total				150						150	
6/12/2004 Total					150	99					249	
6/13/2004	Althea K	D	149			58					58	\$1,290
	Althea K Total					58					58	
	Glory K	D	90			88					88	\$1,500
	Glory K Total					88					88	
	Miss Dorothy	D	141			91					91	\$1,455
	Miss Dorothy Total					91					91	
	Wendy Jean	D	90			105					105	\$1,500
	Wendy Jean Total					105					105	
6/13/2004 Total						342					342	
6/14/2004	Bad Seed	D	89			83					83	\$1,500
	Bad Seed Total					83					83	
6/14/2004 Total						83					83	
6/16/2004	Althea K	D	145			102					102	\$1,510
	Althea K Total					102					102	
	Fiasco	D	119			41					41	\$1,205
	Fiasco Total					41					41	
	Sue-Z	D	126			89					89	\$1,445
	Sue-Z Total					89					89	
6/16/2004 Total						232					232	
6/17/2004	Althea K	D	141	89							89	\$1,445
	Althea K Total			89							89	
	Shannon and Cindy	D	5				10				10	\$1,500
	Shannon and Cindy Total						10				10	
	Sue-Z	D	125			107					107	\$1,535
	Sue-Z Total					107					107	
6/17/2004 Total				89		107	10				206	
6/19/2004	Alicia Ann	D	94			93					93	\$1,500

Appendix A: Tagging Trip Log with Daily Costs

Sum of # Fish				Area							Grand Total	Estimated Daily Costs
Tagged Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	1	2	3	4	5	GB			
6/19/2004	Alicia Ann Total					93				93		
6/19/2004 Total						93				93		
6/21/2004	Ben Fishing	ND	NA	7						7	\$56	
	Ben Fishing Total			7						7		
	Wendy Jean	D	80			0				0	\$1,500	
	Wendy Jean Total					0				0		
	William Gregory	D	111	67						67	\$1,335	
	William Gregory Total			67						67		
6/21/2004 Total				74		0				74		
6/23/2004	Wendy Jean	D	78			56				56	\$1,500	
	Wendy Jean Total					56				56		
6/23/2004 Total						56				56		
6/24/2004	Alicia Ann	D	98			106				106	\$1,500	
	Alicia Ann Total					106				106		
	Ben Fishing	ND	NA	38						38	\$304	
	Ben Fishing Total			38						38		
	Headhunter	D	109			105				105	\$1,525	
	Headhunter Total					105				105		
	Sue-Z	D	123			100				100	\$1,500	
	Sue-Z Total					100				100		
	Time Bandit	D	104			58				58	\$1,290	
	Time Bandit Total					58				58		
6/24/2004 Total				38		369				407		
6/25/2004	Bad Seed	D	81			56				56	\$1,500	
	Bad Seed Total					56				56		
6/25/2004 Total						56				56		
6/26/2004	Alicia Ann	D	106			129				129	\$1,645	
	Alicia Ann Total					129				129		
	Ben Fishing	ND	NA	12						12	\$96	
	Ben Fishing Total			12						12		
6/26/2004 Total				12		129				141		
6/27/2004	William Gregory	D	107	56						56	\$1,280	
	William Gregory Total			56						56		
6/27/2004 Total				56						56		
6/28/2004	Lyndsy Liz	D	200			200				200	\$2,000	
	Lyndsy Liz Total					200				200		
	Magic	D	115	80						80	\$1,400	
	Magic Total			80						80		
6/28/2004 Total				80		200				280		
6/29/2004	Alicia Ann	D	100			75				75	\$1,500	
	Alicia Ann Total					75				75		
	Lyndsy Liz	D	150			100				100	\$1,500	
	Lyndsy Liz Total					100				100		
6/29/2004 Total						175				175		
6/30/2004	Lyndsy Liz	D	133			100				100	\$1,500	
	Lyndsy Liz Total					100				100		
	Magic	D	109	9						9	\$1,045	
	Magic Total			9						9		
6/30/2004 Total				9		100				109		
7/3/2004	Time Bandit	D	106			110				110	\$1,550	
	Time Bandit Total					110				110		
7/3/2004 Total						110				110		
7/8/2004	Ben Fishing	ND	NA	9						9	\$72	
	Ben Fishing Total			9						9		
	Grey Ghost	D	66					66		66	\$1,500	
	Grey Ghost Total							66		66		
7/8/2004 Total				9				66		75		
7/10/2004	Glory K	ND	90	22						22	\$176	
	Glory K Total			22						22		
	Sea Win	ND	NA			46				46	\$368	
	Sea Win Total					46				46		
	Zachary T	ND	NA			22				22	\$176	
	Zachary T Total					22				22		
7/10/2004 Total				22		22	46			90		
7/11/2004	Glory K	ND (M)	90	34						34		
	Glory K Total			34						34		
7/11/2004 Total				34						34		
7/12/2004	Grey Ghost	D	59					52		52	\$1,500	
	Grey Ghost Total							52		52		
	Sea Win	ND	NA			45				45	\$360	
	Sea Win Total					45				45		
7/12/2004 Total						45		52		97		

Appendix A: Tagging Trip Log with Daily Costs

Sum of # Fish											Estimated Daily Costs
Tagged				Area							
Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	1	2	3	4	5	GB	Grand Total	
7/15/2004	Zachary T	ND	NA		14					14	\$112
	Zachary T Total				14					14	
7/15/2004 Total					14					14	
7/17/2004	Grey Ghost	D		61				65		65	\$1,500
	Grey Ghost Total							65		65	
	Sea Win	ND	NA			49				49	\$392
	Sea Win Total					49				49	
7/17/2004 Total						49		65		114	
7/18/2004	Zachary T	ND	NA		8					8	\$64
	Zachary T Total				8					8	
7/18/2004 Total					8					8	
7/22/2004	Breakaway	ND		16			29			29	\$232
	Breakaway Total						29			29	
7/22/2004 Total							29			29	
7/23/2004	Ben Fishing	ND	NA		51					51	\$405
	Ben Fishing Total				51					51	
	Glory K	ND (M)		90	37					37	
	Glory K Total				37					37	
7/23/2004 Total					88					88	
7/24/2004	Sea Win	ND	NA				42			42	\$336
	Sea Win Total						42			42	
7/24/2004 Total							42			42	
7/26/2004	Ben Fishing	ND	NA		49					49	\$392
	Ben Fishing Total				49					49	
7/26/2004 Total					49					49	
7/27/2004	Ben Fishing	ND	NA		17					17	\$136
	Ben Fishing Total				17					17	
	Ridla	D		49				49		49	\$1,500
	Ridla Total							49		49	
7/27/2004 Total					17			49		66	
7/29/2004	Grey Ghost	ND		61				2		2	\$16
	Grey Ghost Total							2		2	
7/29/2004 Total								2		2	
7/30/2004	Glory K	ND (M)		90	40					40	
	Glory K Total				40					40	
7/30/2004 Total					40					40	
8/2/2004	Ben Fishing	ND	NA		8					8	\$64
	Ben Fishing Total				8					8	
	Lyndsy Liz	D		122	88					88	\$1,440
	Lyndsy Liz Total				88					88	
8/2/2004 Total					96					96	
8/8/2004	Glory K	ND (M)		90	34					34	
	Glory K Total				34					34	
8/8/2004 Total					34					34	
8/9/2004	Ben Fishing	ND	NA		42					42	\$336
	Ben Fishing Total				42					42	
8/9/2004 Total					42					42	
8/10/2004	Althea K	D		137	84					84	\$1,420
	Althea K Total				84					84	
	Ben Fishing	ND	NA		21					21	\$168
	Ben Fishing Total				21					21	
	Grey Ghost	D		66				81		81	\$1,500
	Grey Ghost Total							81		81	
8/10/2004 Total					105			81		186	
8/17/2004	Ben Fishing	ND	NA		50					50	\$400
	Ben Fishing Total				50					50	
	Lyndsy Liz	D		118		101				101	\$1,505
	Lyndsy Liz Total					101				101	
8/17/2004 Total					50	101				151	
8/18/2004	Bad Seed	D		84	97					97	\$1,500
	Bad Seed Total				97					97	
	Glory K	ND (M)		90	32					32	
	Glory K Total				32					32	
	Zachary T	ND	NA			15				15	\$120
	Zachary T Total					15				15	
8/18/2004 Total					129	15				144	
8/19/2004	Althea K	D		133	87					87	\$1,435
	Althea K Total				87					87	
8/19/2004 Total					87					87	
8/20/2004	Ben Fishing	ND	NA		34					34	\$272
	Ben Fishing Total				34					34	
8/20/2004 Total					34					34	

Appendix A: Tagging Trip Log with Daily Costs

Sum of # Fish				Area							Grand Total	Estimated Daily Costs
Tagged				1	2	3	4	5	GB			
Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average									
8/22/2004	Ben Fishing	ND	NA	21							21	\$168
	Ben Fishing Total			21							21	
8/22/2004 Total				21							21	
8/25/2004	Susan Lee	ND	NA	94							94	\$620
	Susan Lee Total			94							94	
8/25/2004 Total				94							94	
8/27/2004	Sea Win	ND	NA				46				46	\$368
	Sea Win Total						46				46	
8/27/2004 Total							46				46	
8/28/2004	Susan Lee	ND	NA	89							89	\$595
	Susan Lee Total			89							89	
8/28/2004 Total				89							89	
8/29/2004	Sea Win	ND	NA				46				46	\$368
	Sea Win Total						46				46	
	Susan Lee	ND	NA	150							150	\$900
	Susan Lee Total			150							150	
8/29/2004 Total				150		46					196	
8/30/2004	Ben Fishing	ND	NA	39							39	\$312
	Ben Fishing Total			39							39	
8/30/2004 Total				39							39	
8/31/2004	Ben Fishing	ND	NA	22							22	\$176
	Ben Fishing Total			22							22	
8/31/2004 Total				22							22	
9/1/2004	Ben Fishing	ND	NA	31							31	\$248
	Ben Fishing Total			31							31	
	Sea Win	ND	NA				46				46	\$368
	Sea Win Total						46				46	
9/1/2004 Total				31			46				77	
9/2/2004	Bad Seed	D		87			100				100	\$1,500
	Bad Seed Total						100				100	
	Ben Fishing	ND	NA	39							39	\$312
	Ben Fishing Total			39							39	
	Seahound	ND	NA				101				101	\$655
	Seahound Total						101				101	
	Susan Lee	ND	NA	83							83	\$565
	Susan Lee Total			83							83	
9/2/2004 Total				122		201					323	
9/3/2004	Ben Fishing	ND	NA	3							3	\$24
	Ben Fishing Total			3							3	
	Never Enough	ND	NA				60				60	\$450
	Never Enough Total						60				60	
	Sea Win	ND	NA				45				45	\$360
	Sea Win Total						45				45	
	Seahound	ND	NA				91				91	\$605
	Seahound Total						91				91	
	Susan Lee	ND	NA	96							96	\$630
	Susan Lee Total			96							96	
	Yellowbird	ND	NA				70				70	\$500
	Yellowbird Total						70				70	
9/3/2004 Total				99		266					365	
9/4/2004	Never Enough	ND	NA				36				36	\$288
	Never Enough Total						36				36	
	Sea Win	ND	NA				46				46	\$368
	Sea Win Total						46				46	
	Seahound	ND	NA	86							86	\$580
	Seahound Total			86							86	
	Susan Lee	ND	NA	86							86	\$580
	Susan Lee Total			86							86	
	Yellowbird	ND	NA				59				59	\$445
	Yellowbird Total						59				59	
9/4/2004 Total				172		141					313	
9/6/2004	Never Enough	ND	NA				62				62	\$460
	Never Enough Total						62				62	
	Seahound	ND	NA				60				60	\$450
	Seahound Total						60				60	
	Yellowbird	ND	NA				53				53	\$415
	Yellowbird Total						53				53	
9/6/2004 Total							175				175	
9/7/2004	Never Enough	ND	NA				37				37	\$296
	Never Enough Total						37				37	
	Sea Win	ND	NA				46				46	\$368
	Sea Win Total						46				46	

Appendix A: Tagging Trip Log with Daily Costs

Sum of # Fish											Estimated Daily Costs
Tagged				Area						Grand Total	
Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	1	2	3	4	5	GB		Grand
9/7/2004	Seahound	ND	NA	10						10	\$80
	Seahound Total			10						10	
	Wendy Jean	ND	78	33						33	\$264
	Wendy Jean Total			33						33	
	Yellowbird	ND	NA			75				75	\$525
	Yellowbird Total					75				75	
9/7/2004 Total				43		158				201	
9/8/2004	Never Enough	ND	NA			63				63	\$465
	Never Enough Total					63				63	
	Seahound	ND	NA	4						4	\$32
	Seahound Total			4						4	
	Yellowbird	ND	NA			50				50	\$400
	Yellowbird Total					50				50	
9/8/2004 Total				4		113				117	
9/11/2004	Never Enough	ND	NA			22				22	\$176
	Never Enough Total					22				22	
	Poo Bah	D	83			83				83	\$1,500
	Poo Bah Total					83				83	
	Sea Win	ND	NA			46				46	\$368
	Sea Win Total					46				46	
	Susan Lee	ND	NA	32						32	\$256
	Susan Lee Total			32						32	
	Yellowbird	ND	NA			50				50	\$400
	Yellowbird Total					50				50	
9/11/2004 Total				32		201				233	
9/12/2004	Never Enough	ND	NA			48				48	\$384
	Never Enough Total					48				48	
	Sea Win	ND	NA			45				45	\$360
	Sea Win Total					45				45	
	Susan Lee	ND	NA	36						36	\$288
	Susan Lee Total			36						36	
	Wendy Jean	ND	78			57				57	\$435
	Wendy Jean Total					57				57	
	Yellowbird	ND	NA			51				51	\$405
	Yellowbird Total					51				51	
9/12/2004 Total				36		201				237	
9/13/2004	Miss Dorothy	D	138			101				101	\$1,505
	Miss Dorothy Total					101				101	
	Sea Win	ND	NA			46				46	\$368
	Sea Win Total					46				46	
	Susan Lee	ND	NA	19						19	\$152
	Susan Lee Total			19						19	
9/13/2004 Total				19		147				166	
9/15/2004	Ben Fishing	ND	NA	23						23	\$184
	Ben Fishing Total			23						23	
	Mattanza	ND	NA		65					65	\$475
	Mattanza Total				65					65	
	Sea Win	ND	NA			46				46	\$368
	Sea Win Total					46				46	
	Seahound	ND	NA	11						11	\$88
	Seahound Total			11						11	
	Wendy Jean	ND	78	21						21	\$168
	Wendy Jean Total			21						21	
	Zachary T	ND	NA	23						23	\$184
	Zachary T Total			23						23	
9/15/2004 Total				78	65	46				189	
9/16/2004	Miss Dorothy	D	136			100				100	\$1,500
	Miss Dorothy Total					100				100	
	Susan Lee	ND	NA	35						35	\$280
	Susan Lee Total			35						35	
	Yellowbird	ND	NA			51				51	\$405
	Yellowbird Total					51				51	
9/16/2004 Total				35		151				186	
9/17/2004	Althea K	D	131			91				91	\$1,455
	Althea K Total					91				91	
	Poo Bah	D	60		37					37	\$1,500
	Poo Bah Total				37					37	
	Susan Lee	ND	NA	50						50	\$400
	Susan Lee Total			50						50	
	Tenacious	ND	NA		99					99	\$645
	Tenacious Total				99					99	
	Yellowbird	ND	NA			64				64	\$470

Appendix A: Tagging Trip Log with Daily Costs

Sum of # Fish											Estimated Daily Costs
Tagged				Area							
Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	1	2	3	4	5	GB	Grand Total	
9/17/2004	Yellowbird Total					64				64	
9/17/2004 Total				50	136	155				341	
9/18/2004	Susan Lee	ND	NA	49						49	\$392
	Susan Lee Total			49						49	
	Yellowbird	ND	NA			60				60	\$450
	Yellowbird Total					60				60	
9/18/2004 Total				49		60				109	
9/21/2004	Seahound	ND	NA	40						40	\$320
	Seahound Total			40						40	
	Susan Lee	ND	NA	37						37	\$296
	Susan Lee Total			37						37	
9/21/2004 Total				77						77	
9/22/2004	Sea Win	ND	NA			46				46	\$368
	Sea Win Total					46				46	
	Time Bandit	ND	106	2						2	\$16
	Time Bandit Total			2						2	
9/22/2004 Total				2		46				48	
9/23/2004	Poo Bah	D	75			105				105	\$1,500
	Poo Bah Total					105				105	
9/23/2004 Total						105				105	
9/24/2004	Sea Win	ND	NA			46				46	\$368
	Sea Win Total					46				46	
	Time Bandit	ND	106	1						1	\$8
	Time Bandit Total			1						1	
	Yellowbird	ND	NA			40				40	\$320
Yellowbird Total					40				40		
9/24/2004 Total				1		86				87	
9/25/2004	Sea Win	ND	NA			46				46	\$368
	Sea Win Total					46				46	
	Yellowbird	ND	NA			34				34	\$272
	Yellowbird Total					34				34	
9/25/2004 Total						80				80	
9/26/2004	Tenacious	ND	NA		6					6	\$48
	Tenacious Total				6					6	
9/26/2004 Total					6					6	
9/27/2004	Mattanza	ND	NA			87				87	\$585
	Mattanza Total					87				87	
	Never Enough	ND	NA						53	53	\$415
	Never Enough Total								53	53	
	Poo Bah	D	73			68				68	\$1,500
	Poo Bah Total					68				68	
	Seahound	ND	NA	28						28	\$224
	Seahound Total			28						28	
	Susan Lee	ND	NA	34						34	\$272
Susan Lee Total			34						34		
9/27/2004 Total				62		155			53	270	
9/28/2004	Susan Lee	ND	NA	97						97	\$635
	Susan Lee Total			97						97	
	Yellowbird	ND	NA			57				57	\$435
	Yellowbird Total					57				57	
9/28/2004 Total				97		57				154	
10/1/2004	Headhunter	D	109			109				109	\$1,545
	Headhunter Total					109				109	
	Poo Bah	D	76			87				87	\$1,500
	Poo Bah Total					87				87	
	Sea Win	ND	NA			92				92	\$610
	Sea Win Total					92				92	
	Seahound	ND	NA			99				99	\$645
	Seahound Total					99				99	
	Tenacious	ND	NA			15				15	\$120
	Tenacious Total					15				15	
10/1/2004 Total						402				402	
10/2/2004	Bad Seed	D	89			103				103	\$1,500
	Bad Seed Total					103				103	
	Headhunter	D	109			108				108	\$1,540
	Headhunter Total					108				108	
	Seahound	ND	NA			78				78	\$540
	Seahound Total					78				78	
	Susan Lee	ND	NA	69						69	\$495
Susan Lee Total			69						69		
10/2/2004 Total				69		289				358	
10/4/2004	Bad Seed	D	92			114				114	\$1,500

Appendix A: Tagging Trip Log with Daily Costs

Sum of # Fish Tagged											
Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	Area						Grand Total	Estimated Daily Costs
				1	2	3	4	5	GB		
10/4/2004	Bad Seed Total					114				114	
	Fiasco	D	118			101				101	\$1,505
	Fiasco Total					101				101	
	Mattanza	ND	NA			85				85	\$575
	Mattanza Total					85				85	
	Sea Win	ND	NA			46				46	\$368
	Sea Win Total					46				46	
	Seahound	ND	NA			83				83	\$565
	Seahound Total					83				83	
	Susan Lee	ND	NA	52						52	\$410
	Susan Lee Total			52						52	
	Yellowbird	ND	NA			60				60	\$450
	Yellowbird Total					60				60	
10/4/2004 Total				52		489				541	
10/6/2004	Fiasco	D	116			89				89	\$1,445
	Fiasco Total					89				89	
	Never Enough	ND	NA			91				91	\$605
	Never Enough Total					91				91	
	Seahound	ND	NA			65				65	\$475
	Seahound Total					65				65	
	Susan Lee	ND	NA	55						55	\$425
	Susan Lee Total			55						55	
	Tenacious	ND	NA			137				137	\$835
	Tenacious Total					137				137	
	Wendy Jean	ND	78			15				15	\$120
	Wendy Jean Total					15				15	
	Yellowbird	ND	NA			60				60	\$450
	Yellowbird Total					60				60	
10/6/2004 Total				55		457				512	
10/7/2004	Bad Seed	D	93			102				102	\$1,500
	Bad Seed Total					102				102	
	Fiasco	D	112			70				70	\$1,350
	Fiasco Total					70				70	
	Sea Win	ND	NA			92				92	\$610
	Sea Win Total					92				92	
	Seahound	ND	NA			29				29	\$232
	Seahound Total					29				29	
	Susan Lee	ND	NA	32						32	\$256
	Susan Lee Total			32						32	
	Time Bandit	ND	106			3				3	\$24
	Time Bandit Total					3				3	
	Wendy Jean	ND	78			18				18	\$144
	Wendy Jean Total					18				18	
	Yellowbird	ND	NA			60				60	\$450
	Yellowbird Total					60				60	
10/7/2004 Total				35		371				406	
10/8/2004	Bad Seed	D	94			103				103	\$1,500
	Bad Seed Total					103				103	
	Mattanza	ND	NA			141				141	\$855
	Mattanza Total					141				141	
	Miss Dorothy	D	133			101				101	\$1,505
	Miss Dorothy Total					101				101	
	Seahound	ND	NA	24						24	\$192
	Seahound Total			24						24	
	Susan Lee	ND	NA	80						80	\$550
	Susan Lee Total			80						80	
	Yellowbird	ND	NA			60				60	\$450
	Yellowbird Total					60				60	
10/8/2004 Total				104		405				509	
10/9/2004	Never Enough	ND	NA			106				106	\$680
	Never Enough Total					106				106	
	Sea Win	ND	NA			92				92	\$610
	Sea Win Total					92				92	
	Susan Lee	ND	NA	47						47	\$376
	Susan Lee Total			47						47	
	Wendy Jean	ND	78			37				37	\$296
	Wendy Jean Total					37				37	
	Yellowbird	ND	NA			65				65	\$475
	Yellowbird Total					65				65	
10/9/2004 Total				47		300				347	
10/10/2004	Sea Win	ND	NA			92				92	\$610
	Sea Win Total					92				92	

Appendix A: Tagging Trip Log with Daily Costs

Sum of # Fish											Estimated Daily Costs
Tagged				Area						Grand Total	
Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	1	2	3	4	5	GB		Grand Total
10/10/2004	Susan Lee	ND	NA	62						62	\$460
	Susan Lee Total			62						62	
	Tenacious	ND	NA		172					172	\$1,010
	Tenacious Total				172					172	
	Wendy Jean	ND	78			122				122	\$760
	Wendy Jean Total					122				122	
10/10/2004 Total				62	172	214				448	
10/13/2004	Seahound	ND	NA	29						29	\$232
	Seahound Total			29						29	
	Susan Lee	ND	NA	29						29	\$232
	Susan Lee Total			29						29	
	Tenacious	ND	NA			81				81	\$555
	Tenacious Total					81				81	
10/13/2004 Total				58		81				139	
10/14/2004	Fiasco	D	112			109				109	\$1,545
	Fiasco Total					109				109	
	Seahound	ND	NA	10						10	\$80
	Seahound Total			10						10	
	Susan Lee	ND	NA	22						22	\$176
	Susan Lee Total			22						22	
10/14/2004 Total				32		109				141	
10/15/2004	Seahound	ND	NA	10						10	\$80
	Seahound Total			10						10	
	Susan Lee	ND	NA	38						38	\$304
	Susan Lee Total			38						38	
	Tenacious	ND	NA		2					2	\$16
	Tenacious Total				2					2	
10/15/2004 Total				48	2					50	
10/18/2004	Fiasco	D	111			93				93	\$1,465
	Fiasco Total					93				93	
	Sea Win	ND	NA			46				46	\$368
	Sea Win Total					46				46	
	Seahound	ND	NA			41				41	\$328
	Seahound Total					41				41	
	Susan Lee	ND	NA	22						22	\$176
	Susan Lee Total			22						22	
	Tenacious	ND	NA			100				100	\$650
	Tenacious Total					100				100	
10/18/2004 Total				22		280				302	
10/19/2004	Seahound	ND	NA			61				61	\$455
	Seahound Total					61				61	
	Time Bandit	ND	106	5						5	\$40
	Time Bandit Total			5						5	
10/19/2004 Total				5		61				66	
10/20/2004	Ben Fishing	ND	NA		10					10	\$80
	Ben Fishing Total				10					10	
10/20/2004 Total					10					10	
10/29/2004	Sea Win	ND	NA			38				38	\$304
	Sea Win Total					38				38	
	Seahound	ND	NA			40				40	\$320
	Seahound Total					40				40	
	Susan Lee	ND	NA	34						34	\$272
	Susan Lee Total			34						34	
	Tenacious	ND	NA		7					7	\$56
	Tenacious Total				7					7	
10/29/2004 Total				34	7	78				119	
10/30/2004	Tenacious	ND	NA			44				44	\$352
	Tenacious Total					44				44	
10/30/2004 Total						44				44	
11/2/2004	Alicia Ann	ND	100			97				97	\$635
	Alicia Ann Total					97				97	
	Fiasco	D	106			24				24	\$1,120
	Fiasco Total					24				24	
	Tenacious	ND	NA		28					28	\$224
	Tenacious Total				28					28	
11/2/2004 Total					28	121				149	
11/4/2004	Ben Fishing	ND	NA			36				36	\$288
	Ben Fishing Total					36				36	
	Tenacious	ND	NA		20					20	\$160
	Tenacious Total				20					20	
	Time Bandit	ND	106	12						12	\$96
	Time Bandit Total			12						12	

Appendix A: Tagging Trip Log with Daily Costs

Sum of # Fish											Estimated Daily Costs	
Tagged				Area						Grand Total		
Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	1	2	3	4	5	GB			
11/4/2004 Total				12	20	36					68	
11/7/2004	Time Bandit	ND	106	23							23	\$184
	Time Bandit Total			23							23	
11/7/2004 Total				23							23	
11/10/2004	Fiasco	D	102			44					44	\$1,220
	Fiasco Total					44					44	
	Poo Bah	D	72		54						54	\$1,500
	Poo Bah Total				54						54	
	Shalako	D	131		64						64	\$1,320
	Shalako Total				64						64	
	Sue-Z	D	120		66						66	\$1,330
	Sue-Z Total				66						66	
	Surfbreaker	D	100		14						14	\$1,500
	Surfbreaker Total				14						14	
	Susan Lee	ND	NA	39							39	\$312
	Susan Lee Total			39							39	
11/10/2004 Total				39	198	44					281	
11/16/2004	Snug Harbor Express	ND	NA					17			17	\$136
	Snug Harbor Express Total							17			17	
11/16/2004 Total								17			17	
11/17/2004	Glory K	D	88	56							56	\$1,500
	Glory K Total			56							56	
	Miss Melodye	D	100	28							28	\$1,500
	Miss Melodye Total			28							28	
	Peggy B II	ND	177			21					21	\$168
	Peggy B II Total					21					21	
	Poo Bah	D	65		21						21	\$1,500
	Poo Bah Total				21						21	
	Rueby	D	48		48						48	\$1,500
	Rueby Total				48						48	
	Shalako	D	126			40					40	\$1,200
	Shalako Total					40					40	
	Surfbreaker	D	95	0							0	\$1,500
	Surfbreaker Total			0							0	
	Susan Lee	ND	NA	41							41	\$328
	Susan Lee Total			41							41	
	Tenacious	ND	NA		48						48	\$384
	Tenacious Total				48						48	
	Time Bandit	ND	106	8							8	\$64
	Time Bandit Total			8							8	
11/17/2004 Total				133	117	61					311	
11/18/2004	Poo Bah	D	60		24						24	\$1,500
	Poo Bah Total				24						24	
	Rueby	D	52		55						55	\$1,500
	Rueby Total				55						55	
	Shalako	D	124		80						80	\$1,400
	Shalako Total				80						80	
	Sorry Charlie	D	46					68			68	\$1,500
	Sorry Charlie Total							68			68	
	Sue-Z	ND (M)	120		39						39	
	Sue-Z Total				39						39	
	Surfbreaker	D	90		5						5	\$1,500
	Surfbreaker Total				5						5	
	Susan Lee	ND	NA	33							33	\$264
	Susan Lee Total			33							33	
	Tenacious	ND	NA		21						21	\$168
	Tenacious Total				21						21	
11/18/2004 Total				33	224			68			325	
11/19/2004	Sorry Charlie	D	43					33			33	\$1,500
	Sorry Charlie Total							33			33	
	Time Bandit	ND	106	7							7	\$56
	Time Bandit Total			7							7	
11/19/2004 Total				7				33			40	
11/20/2004	Lady Frances	ND	NA				27				27	\$216
	Lady Frances Total						27				27	
	Rosey S	D	127		127						127	\$1,635
	Rosey S Total				127						127	
	Shalako	D	123		96						96	\$1,480
	Shalako Total				96						96	
	Tenacious	ND	NA	16							16	\$128
	Tenacious Total			16							16	
11/20/2004 Total					239		27				266	

Appendix A: Tagging Trip Log with Daily Costs

Sum of # Fish											Estimated Daily Costs
Tagged				Area							
Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	1	2	3	4	5	GB	Grand Total	
1/8/2005	Murrulet Total			54						54	
1/8/2005	Total			108						108	
1/9/2005	Magic	ND (M)	109	33						33	
	Magic Total			33						33	
	Miss Melodye	ND (M)	89	22						22	
	Miss Melodye Total			22						22	
1/9/2005	Total			55						55	
1/10/2005	Miss Melodye	ND (M)	89	35						35	
	Miss Melodye Total			35						35	
	Murrulet	ND (M)	79	72						72	
	Murrulet Total			72						72	
1/10/2005	Total			107						107	
1/11/2005	Surfbreaker	ND (M)	89							13	
	Surfbreaker Total									13	
1/11/2005	Total									13	
1/30/2005	Bad Dog	ND	NA	10						10	\$80
	Bad Dog Total			10						10	
1/30/2005	Total			10						10	
2/4/2005	Lady Frances	ND	NA					1		1	\$8
	Lady Frances Total							1		1	
2/4/2005	Total							1		1	
2/6/2005	Lady Frances	ND	NA					1		1	\$8
	Lady Frances Total							1		1	
2/6/2005	Total							1		1	
2/19/2005	Bay Breeze	D	0					0		0	\$1,500
	Bay Breeze Total							0		0	
2/19/2005	Total							0		0	
2/26/2005	Lady Frances	ND	NA					10		10	\$80
	Lady Frances Total							10		10	
2/26/2005	Total							10		10	
2/27/2005	Lady Frances	ND	NA					22		22	\$176
	Lady Frances Total							22		22	
2/27/2005	Total							22		22	
3/11/2005	Murrulet	ND (M)	79	19						19	
	Murrulet Total			19						19	
3/11/2005	Total			19						19	
3/19/2005	Gail Frances	ND	NA					52		52	\$410
	Gail Frances Total							52		52	
3/19/2005	Total							52		52	
3/20/2005	Gail Frances	ND	NA					53		53	\$415
	Gail Frances Total							53		53	
3/20/2005	Total							53		53	
3/22/2005	Bay Breeze	D	0					0		0	\$1,500
	Bay Breeze Total							0		0	
3/22/2005	Total							0		0	
3/26/2005	Breakaway	ND	16					40		40	\$320
	Breakaway Total							40		40	
	Gail Frances	ND	NA					15		15	\$120
	Gail Frances Total							15		15	
3/26/2005	Total							55		55	
3/27/2005	Breakaway	ND	16					22		22	\$176
	Breakaway Total							22		22	
3/27/2005	Total							22		22	
4/1/2005	Gail Frances	ND	NA					41		41	\$328
	Gail Frances Total							41		41	
4/1/2005	Total							41		41	
4/6/2005	Gail Frances	ND	NA					24		24	\$192
	Gail Frances Total							24		24	
	Peggy B II	ND (M)	177					11		11	
	Peggy B II Total							11		11	
4/6/2005	Total							35		35	
4/9/2005	Gail Frances	ND	NA					8		8	\$64
	Gail Frances Total							8		8	
4/9/2005	Total							8		8	
4/10/2005	Gail Frances	ND	NA					14		14	\$112
	Gail Frances Total							14		14	
4/10/2005	Total							14		14	
5/4/2005	Gail Frances	ND	NA					40		40	\$320
	Gail Frances Total							40		40	
5/4/2005	Total							40		40	
5/6/2005	Gail Frances	ND (M)	NA					18		18	
	Gail Frances Total							18		18	

Appendix A: Tagging Trip Log with Daily Costs

Sum of # Fish Tagged												
				Area							Grand	Estimated Daily
Date	Vessel	Dedicated or Nondedicated	Running Dedicated Average	1	2	3	4	5	GB	Total	Costs	
5/6/2005 Total								18		18		
5/30/2005	Surfbreaker	ND (M)	89		4					4		
Surfbreaker Total					4					4		
5/30/2005 Total					4					4		
Grand Total				18440	20971	18763	709	1135	53	60071		

CCCHFA Cod. Tagging Finance Summary
 NOAA (CRPP) Contract # EA 133F-03-CN-0013

	Budget		Total	Actual		Total	Actual (Over)/Under Budget
	2003	2004/5		2003	2004/5		
Dedicated Tagging		450,000		195,500	402,000	597,500	
Selected Tagging		80,000		52,152	99,706	151,858	
Tagging	247,400	530,000	777,400	247,652	501,706	749,358	28,043
Payroll	35,000	54,000	89,000	33,491	54,801	88,292	708
Consulting	10,000	35,000	45,000	10,620	42,017	52,637	(7,637)
Administration		12,000	12,000		12,000	12,000	-
Misc Expenses	7,100	2,000	9,100	3,775	3,556	7,331	1,769
	299,500	633,000	932,500	295,538	614,079	909,617	22,883