



Welcome to the Virtual Invasive Carp Forum August 9, 2022

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- If you have a question during the meeting, please use the CHAT button (the CHAT button is typically at the top of the screen); click on this and you can type in your question or comment.
- If you are calling in from a phone, during the Q&A session at the end of all presentations, press *6 to unmute your phone to ask your question. Please state your name.



AGENDA



Welcome and Opening Remarks

- U.S. Fish and Wildlife Service - Region 3
- Illinois Department of Natural Resources

Invasive Carp Forum Purpose and Desired Outcomes

- USFWS

IDNR Invasive Carp Business Process Analysis

- IDNR/Tetra Tech

State Agency Use of Commercial Harvest for Invasive Carp Control

- Illinois Department of Natural Resources
- Kentucky Department of Fish and Wildlife Resources
- Tennessee Wildlife Resources Agency

Opportunities for Increased Use of Invasive Carp Harvested through Control Actions

- Facilitated discussion to identify opportunities and challenges for increased use of harvested invasive carp for product use.

Meeting Wrap-Up and Next Steps

Meeting adjourns @4:00PM CT



BUSINESS PROCESS ANALYSIS AND GROWTH OF AN INDUSTRY

August 9, 2022

Presenters

Kevin Irons

Assistant Chief

Fisheries Division

Illinois Department of Natural Resources

Gina Behnfeldt

Program Manager

VP Economic Development Services

Tetra Tech



TETRA TECH

BUSINESS PROCESS ANALYSIS AND GROWTH OF AN INDUSTRY

OVERVIEW

- Business Process Analysis
 - Premise/Purpose, Key Findings, Recommendations
- Implementation
 - Fishers' and Processors Programs
 - Marketing Strategy
- What's Next



BUSINESS PROCESS ANALYSIS AND GROWTH OF AN INDUSTRY

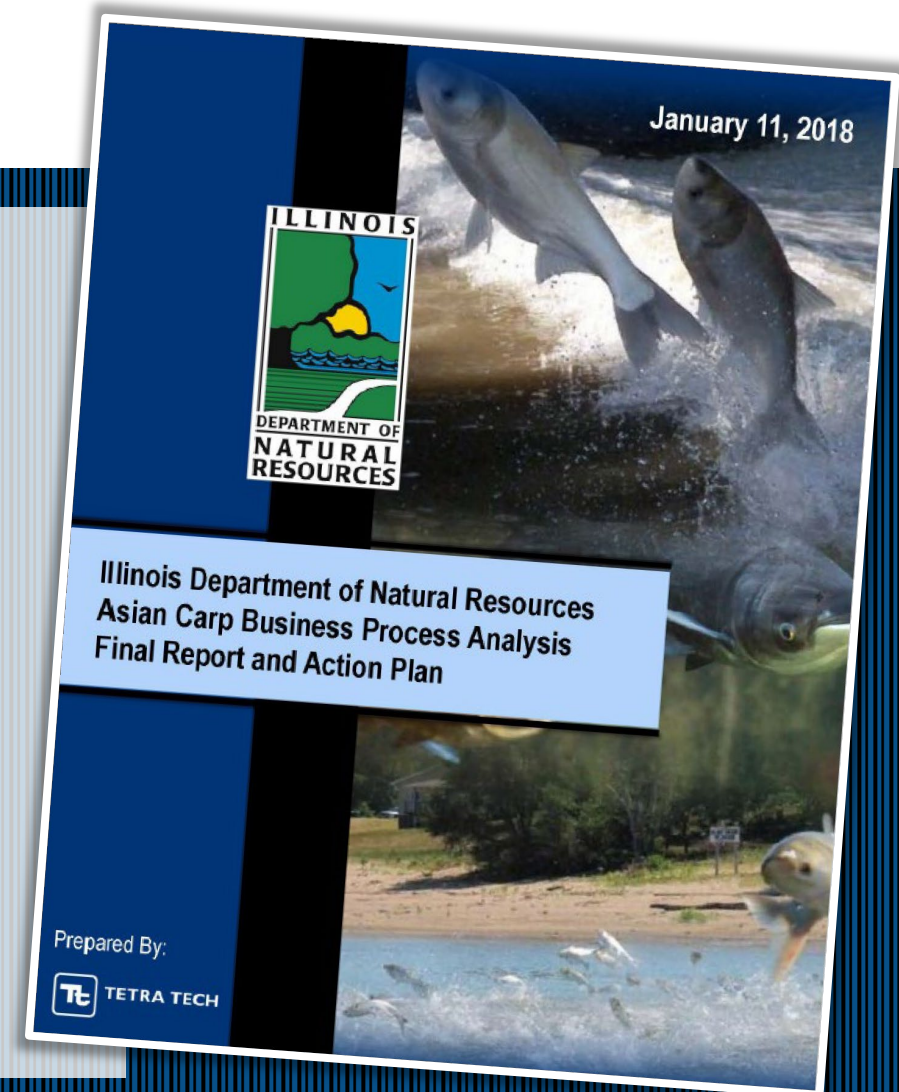
■ PREMISE:

- Enormous biomass of invasive carp
- Yet few businesses – WHY?

■ PURPOSE OF STUDY:

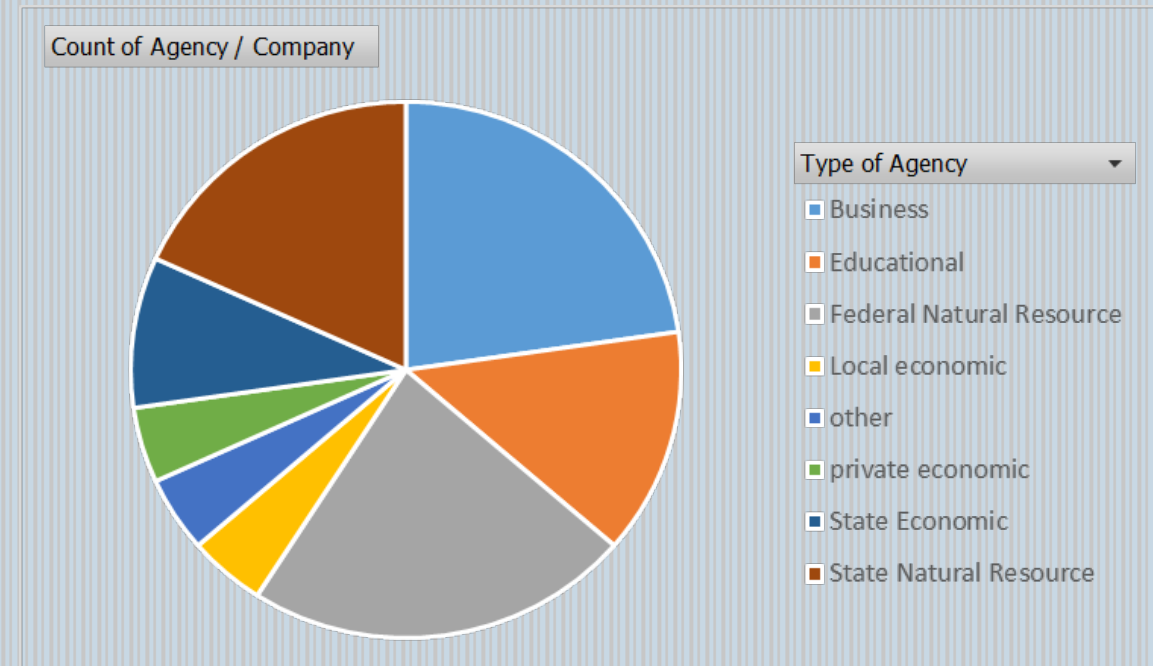
- Identify the “sticking points” for why more businesses are not taking advantage of these fish
- Recommend ways to encourage business growth

■ IN SERVICE OF REMOVAL GOALS



STUDY INVOLVED

- Research – reviewed over 40 studies, articles and papers
- Conducted 35 Stakeholder Interviews
 - Federal, State and local departments and agencies
 - Members of ICRCC (*then ACRCC*)
 - Universities
 - Other States
 - Advocacy groups
 - Fishers
 - Fish Processors & End-Users



NUMBER OF PRODUCTS ALREADY AVAILABLE

- Fine Dining
- Smoked Fish
- Nutritional Suppl.
- Surimi
- Fish Paste
- Fish Meal/Powder
- Pet Treats
- Fertilizer
- Leather
- Bait



KEY FINDINGS

■ Invasive Carp Products

- Clear markets for these fish

■ The Fish

- Misguided perception as “trash fish”
- Yet favorable results at tasting events

■ Fishers

- Significant decline of the industry
- Low price of invasive carp sale to buyers

■ Processors

- Lack of consistent supply
- Quality (freshness)
- Processing infrastructure
- Reflected misguided perceptions of the fish

■ Transportation

- Cost
- Fishers largely responsible for delivery to processors



KEY FINDINGS (CONT'D.)

- **Information Sharing**

- No central point for businesses to go for opportunities

- **Regulatory**

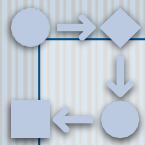
- Transport across state lines, environmental regulations, use of certain nets/equipment
- But general willingness on part of regulatory agencies to work to clear challenges

- **Chinese & Other International Markets**

- Many inquiries, few viable opportunities
- Volume requested beyond current capacity
- Experienced China exporter needed



RECOMMENDATIONS

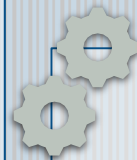


Create an Incentive Program

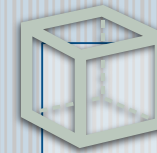
- Connect Fishers and Processors
- Provide Current, Reliable Information on Fish Populations
- Improve Transportation Infrastructure



Create Dialogue about Regulatory Considerations



Develop Brand and Marketing Strategy



Provide Ice to Fishers



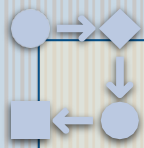
Engage SMEs in Chinese and Other International Markets

IMPLEMENTATION

Provide Ice to Fishers



IMPLEMENTATION

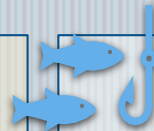


Create an Incentive Program

- Connect Fishers and Processors
- Provide Current, Reliable Information on Fish Populations
- Improve Transportation Infrastructure



Create Dialogue about Regulatory Considerations



Enhanced Contract Fishing Program

- IL Licensed Commercial Fishers
- 10¢ per lb for Invasive Carp
- Caught in Peoria Pool of Illinois River
 - Expanded to LaGrange and Alton Pools
- If sold to processor for minimum price
 - 7¢ per lb

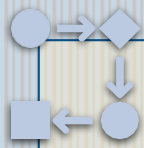


Program Results

- Nearly 9.4 M lbs removed since inception, Oct 2019
- 19 fishers currently under contract
- Increased sale price



IMPLEMENTATION

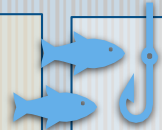


Create an Incentive Program

- Connect Fishers and Processors
- Provide Current, Reliable Information on Fish Populations
- Improve Transportation Infrastructure



Create Dialogue about Regulatory Considerations



Enhanced Contract Fishing – Wabash & Tributaries

- Licensed Commercial Fishers
- 10¢ per lb for Invasive Carp
- Caught in Wabash River or IL Tributaries
- If sold to processor for minimum price
 - 7¢ per lb

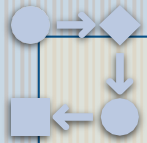


Program Results

- Nearly 650 ,000 lbs removed since inception, March 2022
- 7 fishers currently under contract
- 1 significant fisher – additional funds make the difference in fishing this area



IMPLEMENTATION

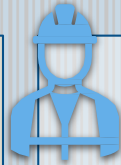


Create an Incentive Program

- Connect Fishers and Processors
- Provide Current, Reliable Information on Fish Populations
- Improve Transportation Infrastructure



Create Dialogue about Regulatory Considerations



Contracted Facilitation for Processors

- Processors picking up waterside, or delivery to facilities within 10 miles of designated waters' edge
- 5 designated waters – Peoria Pool, IL River; Wabash River; Mississippi River, Pools 19, 20, 21; Kentucky & Barkley Lakes
- 5¢ per lb for Invasive Carp bought for minimum price



Program Results

- Over 4M lbs removed since inception, April 2022
- 8 processors currently under contract
- 1 new processor picking up waterside
- Processors reporting investment in equipment



IMPLEMENTATION

Develop Brand
and Marketing
Strategy

Design Team



BUSINESS PROCESS ANALYSIS, GROWTH OF AN INDUSTRY



Rebranding

Human Consumption Focus

Design Team Researched

Other successful re-naming efforts

Consumption trends & preferences

Positive attributes of Invasive Carp

3 Intercept Surveys

2 Focus Groups



- Name change led consumption levels to spike to nearly 19 million lb. per year
- Orange Roughy is now on the Monterey Bay Aquarium Seafood Watch "Avoid" List as methods used to catch these fish are very damaging to ancient, deep-sea corals.

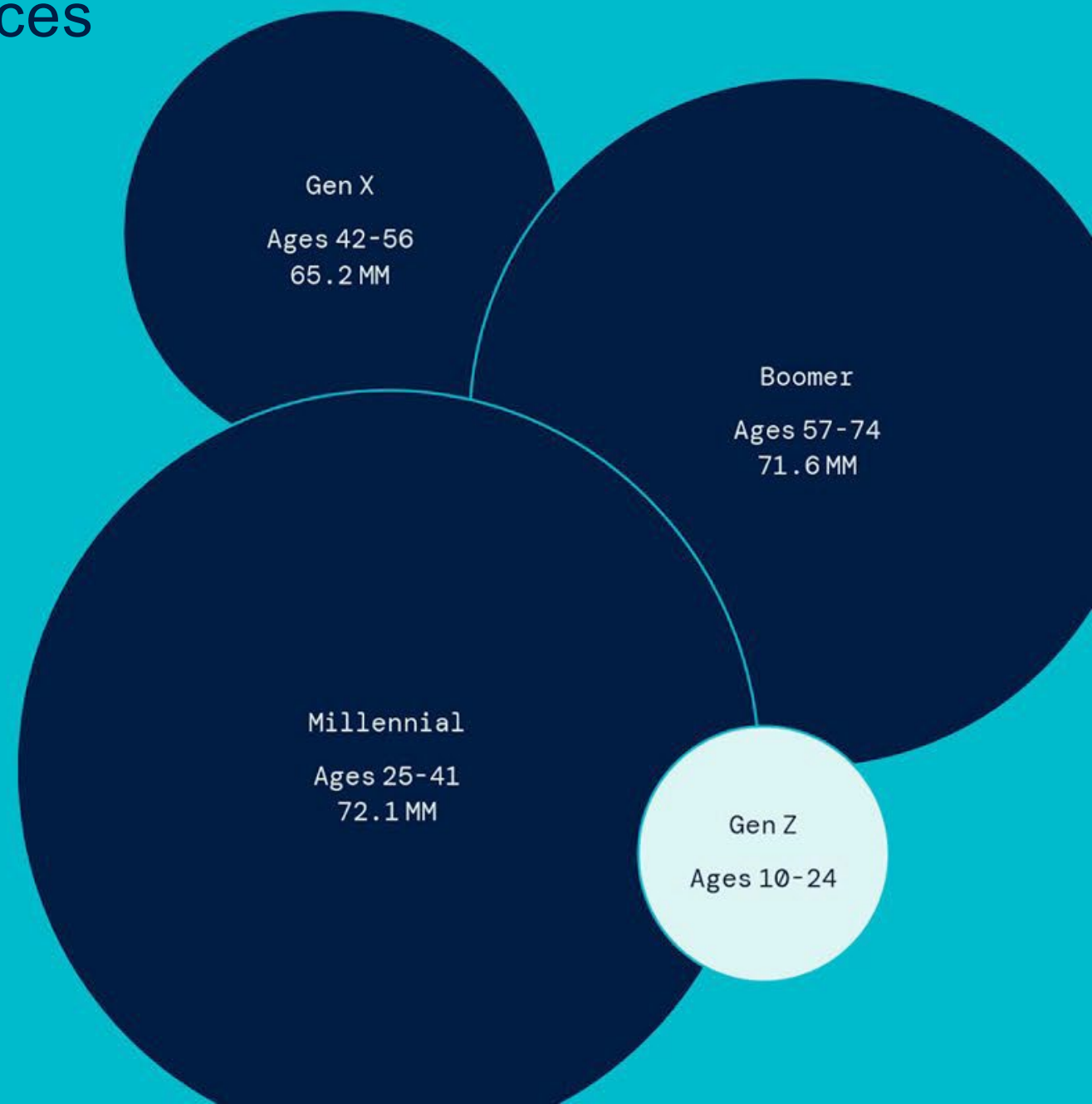
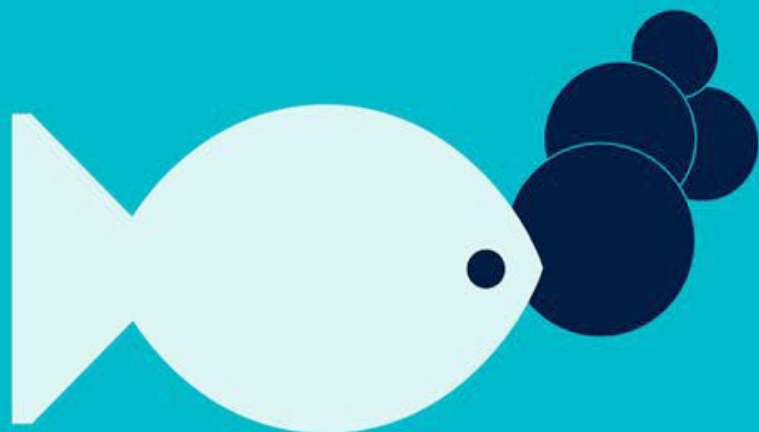
Consumption Trends & Preferences

Demographics

Millennials

Boomers

Gen X



Consumption Trends & Preferences

Food awareness has become a popular trend to the point that it now has become a value system that drives cultural and food purchase behavior.

“The Secret Sauce for a Modern Brand: Food Marketing Secrets for Millennial Brand Success” *(Barkely, 2014)*

Eat well, do good.

“Millennials believe in brands ... in powerful ideas that align with their values. There is a tipping point where brands that are winning in the marketplace are standing for more than just their bottom line in ways that are more transparent and authentic than ever before.”

“Millennials are a generation that builds stronger connections to brands that promote sustainability in addition to corporate responsibility. The trend is to now purchase brands and products that make it easier to maintain this sustainable lifestyle.”

“The movement to buy locally grown products has created a food-smart Millennial consumer. Millennials want to better understand where their food is coming from, who is making it and where the ingredients are sourced. Brands that can bring food knowledge into their product experience could be big winners in the race for transparency.”

“Millennials are especially interested in the story behind their food and looking to learn more about what’s in it and how it’s made: 8 in 10 said they like ‘behind the scenes’ commercials for foods they consume, they want to know more about how their food is produced, and they think brands don’t disclose enough about their food products.”

...and it should taste delicious too.

Positive Attributes of Invasive Carp

Wild-caught

Great alternative to farmed raised or over-fished fish.

Locally sourced

Fresh from Illinois and Midwest waterways.

Responsible

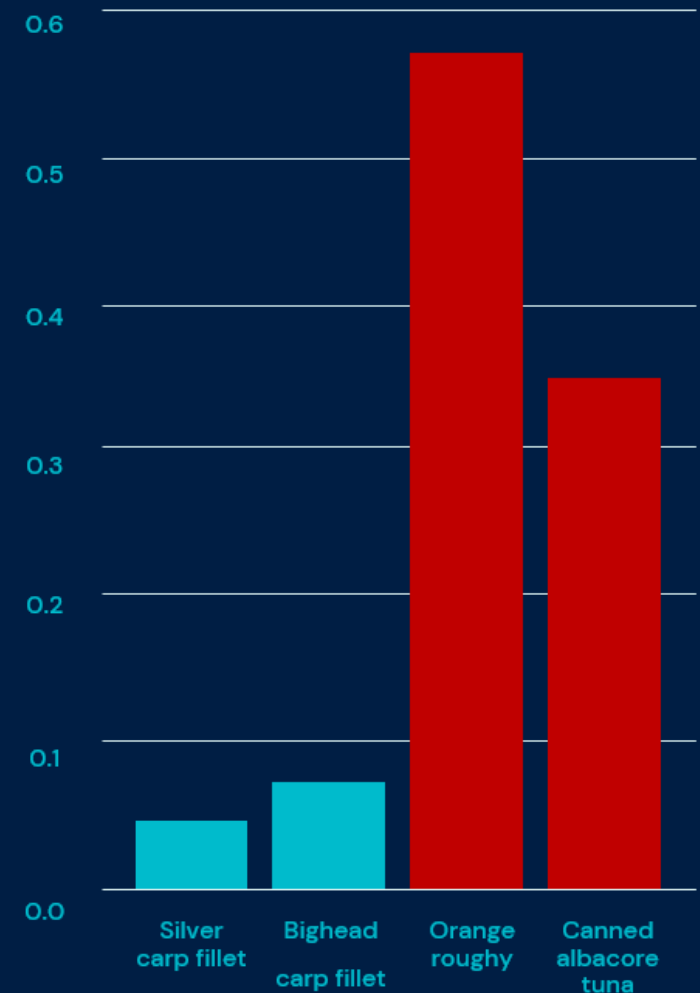
Recommended as a Good* choice by the Monterey Bay Aquarium Seafood Watch. * Seafoodwatch.org

Healthful

Invasive carp is a clean, top-feeding freshwater fish, very low in contaminants* and heavy metals* that compares favorably to Tuna, Cod and Orange Roughy.

* Well below US Food and Drug Administration (FDA) limits.

Invasive carp is a nutritious fish, and a great source of protein and omega-3 and -6 fatty acids.



Total Mercury mg/kg

Data Source: Southern Illinois University

Invasive Carp is Delicious

Flavor, texture, color.

Invasive carp is a mildly flavored, firm, flaky, freshwater fish. Its place is among the most popular white fish — more savory than Tilapia, cleaner tasting than Catfish, less flaky than Cod.

Invasive carp has a clean, mild flavor profile that marries well with a range of seasonings. It's a chef's blank canvas for creativity — pan fry, steam, broil, bake, roast, or grill. Invasive carp can be ground for burgers, fish cakes, dumplings and tacos.



Positive Attributes of Invasive Carp

Doing good by eating Invasive carp

Contributing to solution of a dire ecological problem

Helping small-scale, local fishermen

Bringing back a traditional industry

Growing the regional food hub

Helping to Address Food Insecurity

Domestically

Internationally

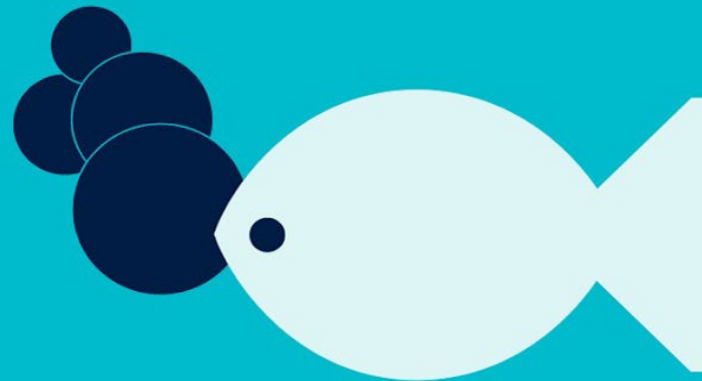
After exploring ...

other successful renaming efforts

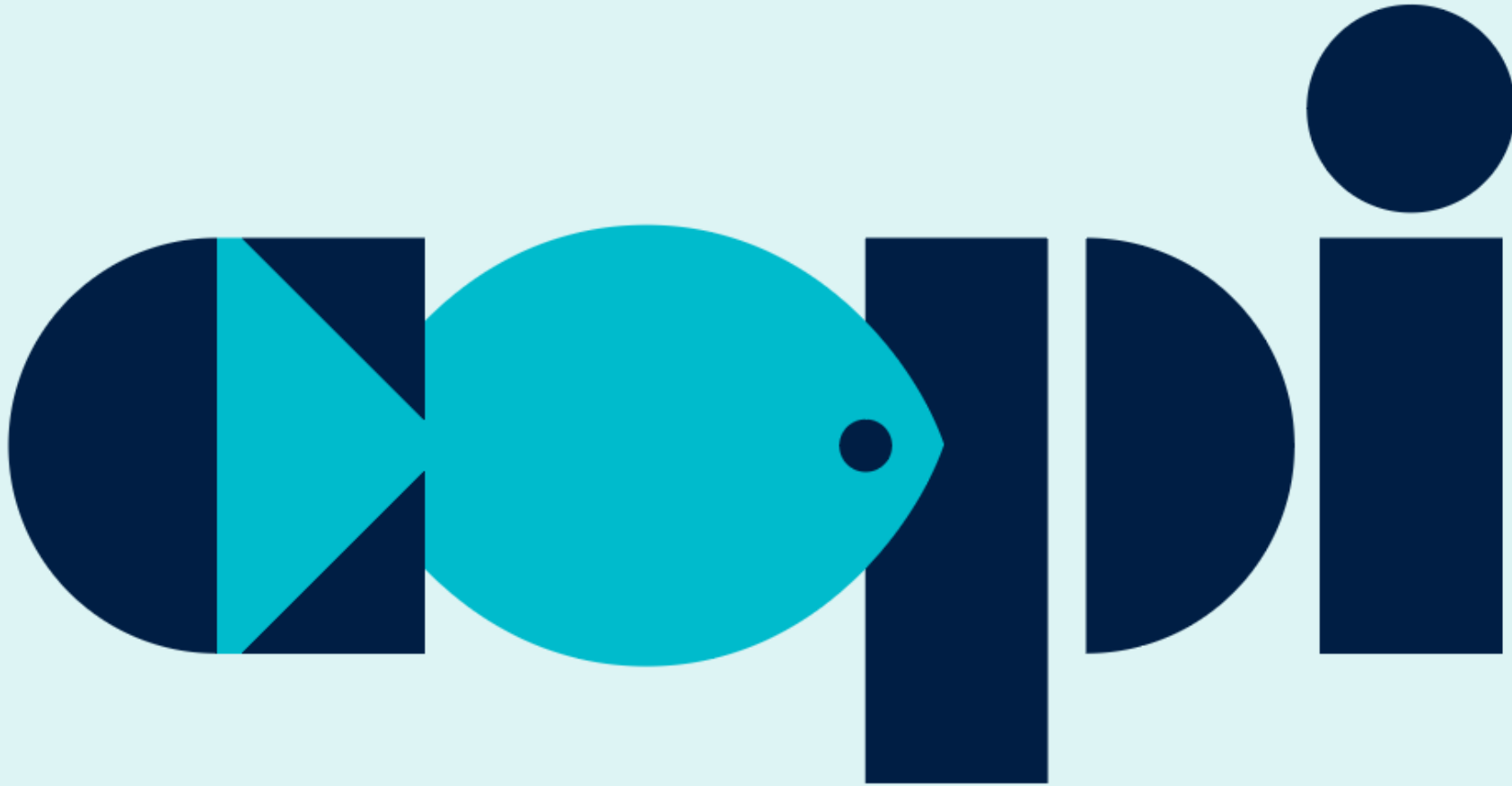
demographic trends and buying preferences

and how well the positive attributes of Invasive carp
sync with those trends

...the team generated hundreds of names.



...and narrowed them down to one:



Derived from the word *copious*, meaning *abundant*...

Launched on June 22, 2022

Virtual Launch Event

- Featuring two professionally produced videos and celebrity chef spokespeople

<https://www.youtube.com/user/TheIllinoisDNR>, “A new name for Asian carp by IDNR”

Broad, Extensive Media Coverage

- Very Positive
- Associated Press, Reuters, Chicago Tribune, Washington Post, Food & Wine Magazine, The Economist, and many others
- Multiple local and regional television stations as well as national documentary interest by PBS
- National radio including NPR, Science Friday

Launch Results Cont'd.

Social Media

- Significant engagement on Facebook, Instagram, Twitter, LinkedIn

Social Media Advertising

- 4X increase in demand

Website – ChooseCopi.com

- Significant visits and direct searches - Copi Near Me

Weekly new, viable opportunities

Copi Offered in 7 states

Removal

- Approximately 1.1 M lbs have been sold since launch

Launch Results Cont'd.

Product Offerings – current

- Boneless strips
- Minced (ground) boneless
- Boneless & bone-in fillets
- Smoked
- Whole – headed, gutted
- Bouillon
- Fish Paste
- Baked
- Breaded/fried
- Tacos, sliders
- Dumplings, fish rolls
- Dip
- Soups and stews
- Flavoring

Growth in process

- Interest of national food distributors
- Supermarket chains
- Private product labels

...stay tuned, we'll be in the news, again!

WHAT'S NEXT - LOOK AHEAD

- Increasing Number of Fishers
 - Overcoming barriers to entry
 - One processor offered a “loan” to allow a fisher to buy needed equipment, loan paid back by fishing for the processor
- Increasing Investment in Icing on Board
 - **Take Home Point**
 - Put funding in the hands of those who know what to do with it



WHAT'S NEXT - LOOK AHEAD

- Processor Equipment Investment
- Creating a Cohesive, Cooperative Industry
 - Copi Collaborative
- Coordinated Government
 - On the business side

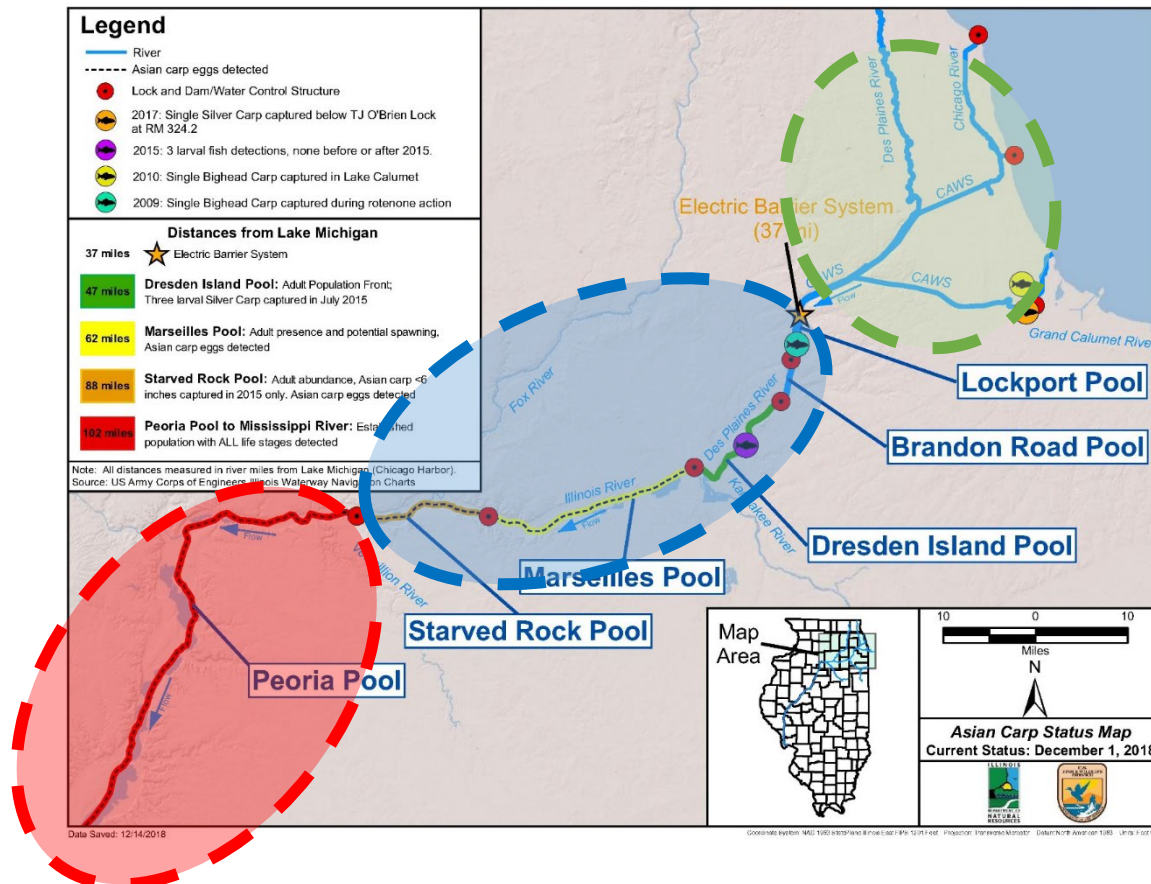
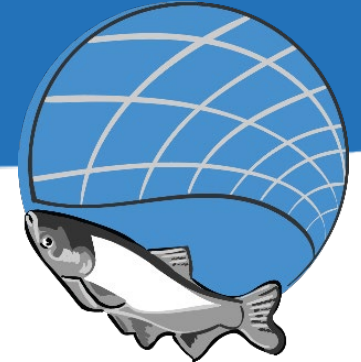




Kevin S. Irons
Assistant Chief
Fisheries Division

Forum on Invasive Carp Contract Fishing and Product Utilization

Protecting the Great Lakes AND Illinois waters





Monitoring and Response Plan

(since 2010 supported by Multiple Agency Strategy)



1) Detection:

Determine the distribution and abundance of invasive carp to guide response and control actions

2) Manage and Control:

Prevent upstream passage of invasive carp towards Lake Michigan via use of barriers, mass removal, and understanding best methods for preventing passage

3) Response:

Establish comprehensive procedures for responding to changes in invasive carp population status, test these procedures through exercises, and implement as necessary

Approximately 27 projects coordinated under this plan, presenting just a few of the results.

Work reviewed annually





Monitoring and Response Plan

(since 2010 supported by [Multiple Agency Strategy](#))



Contract fishing

- Contract fishers for fish removal (UPPER IWW)
- > 10 million pounds removed **to date (1.3 M lbs 2020)**
- Use gill/trammel nets, hoop nets, Great Lakes pound nets, and commercial seine hauls, Unified
- Little impact to native fishes (< 1% of total catch is game fish, mostly catfishes and put back into waters immediately)

Enhanced Contract fishing

- 7.2 M lbs removed from PEORIA POOL
 - 2019 – 518,132 (launched fall 2019)
 - 2020 – 3+ M lbs (YTD)
 - 2021 – 3+ M lbs
 - 2022 – 380k lbs (YTD)
 - Provide contracted incentive for existing commercial fishing to best manage and control spread (GL)
 - Build IL ability to harvest, process, remove, develop business

Goals: Prevent spread and reduce impacts to native species



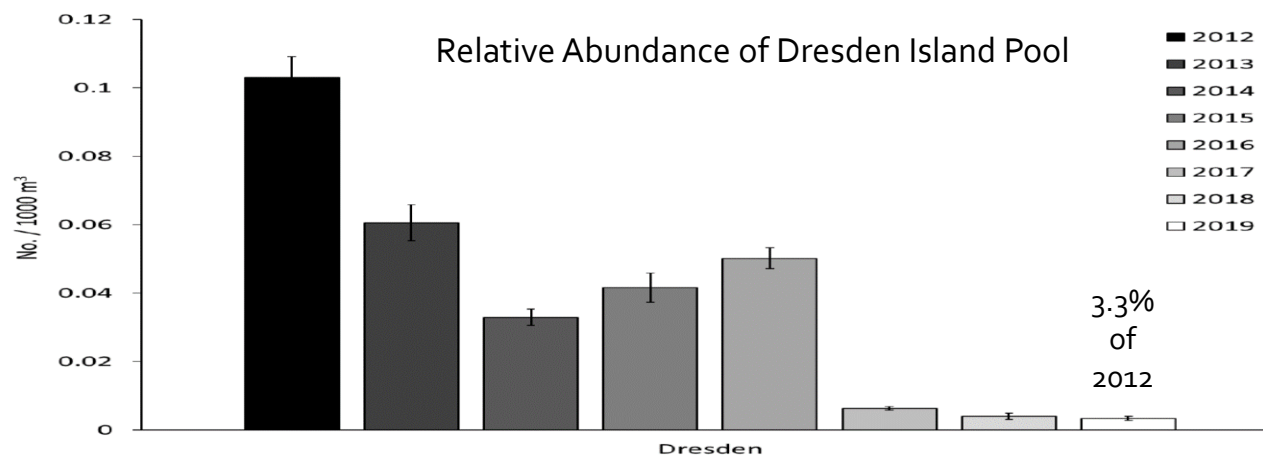
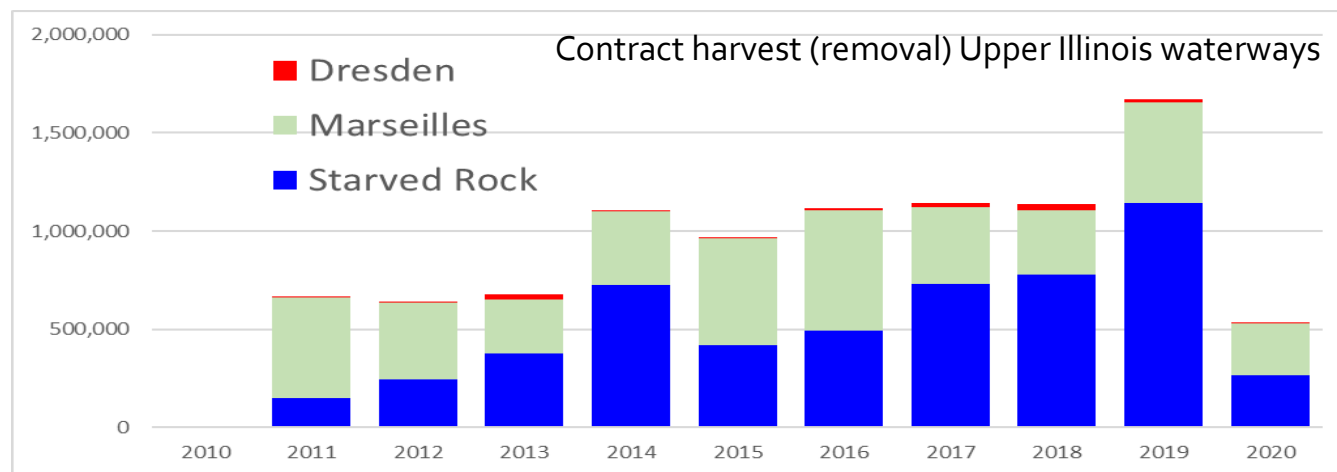


Monitoring and Response Plan

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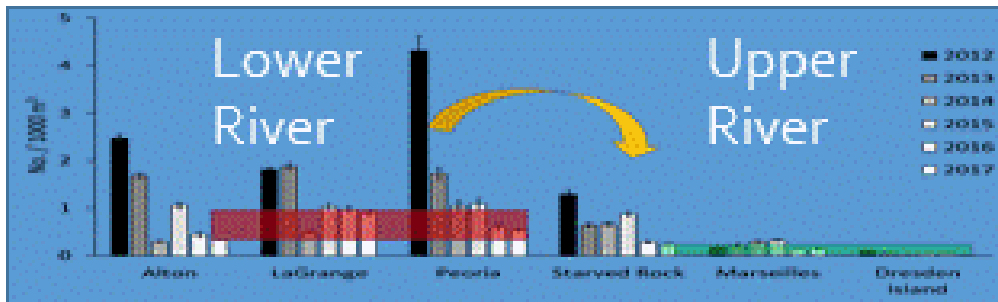


RESULTS



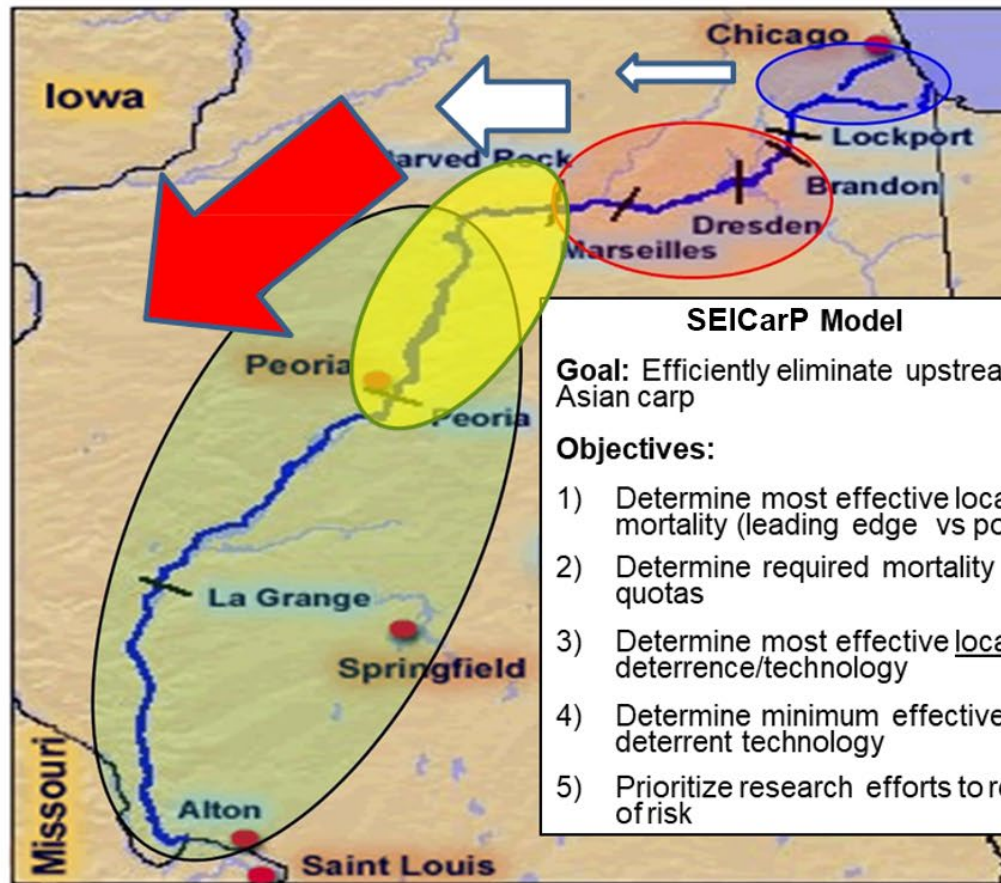
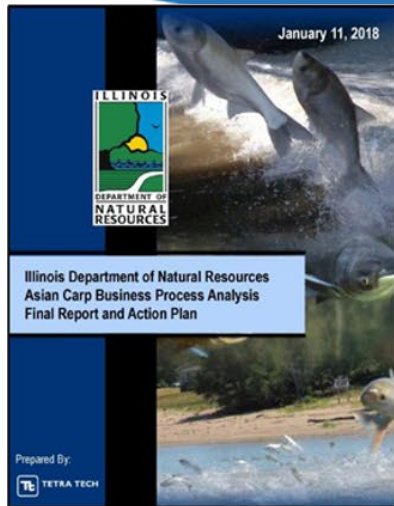
Overall strategy

- Contract fishing (Upper River)
- Enhanced Contract Fishing (Peoria/lower river)



Enhanced Contract Fishing

increased focus on lower waterway/Peoria Pool, expanding removal and opportunities, further reducing upstream expansion, reducing population (recommended by modeling)



SEICarP Model

Goal: Efficiently eliminate upstream progression of Asian carp

Objectives:

- 1) Determine most effective locations to target adult mortality (leading edge vs population source)
- 2) Determine required mortality rates and quotas
- 3) Determine most effective locations for possible deterrence/technology
- 4) Determine minimum effectiveness rates for deterrent technology
- 5) Prioritize research efforts to reduce uncertainty of risk

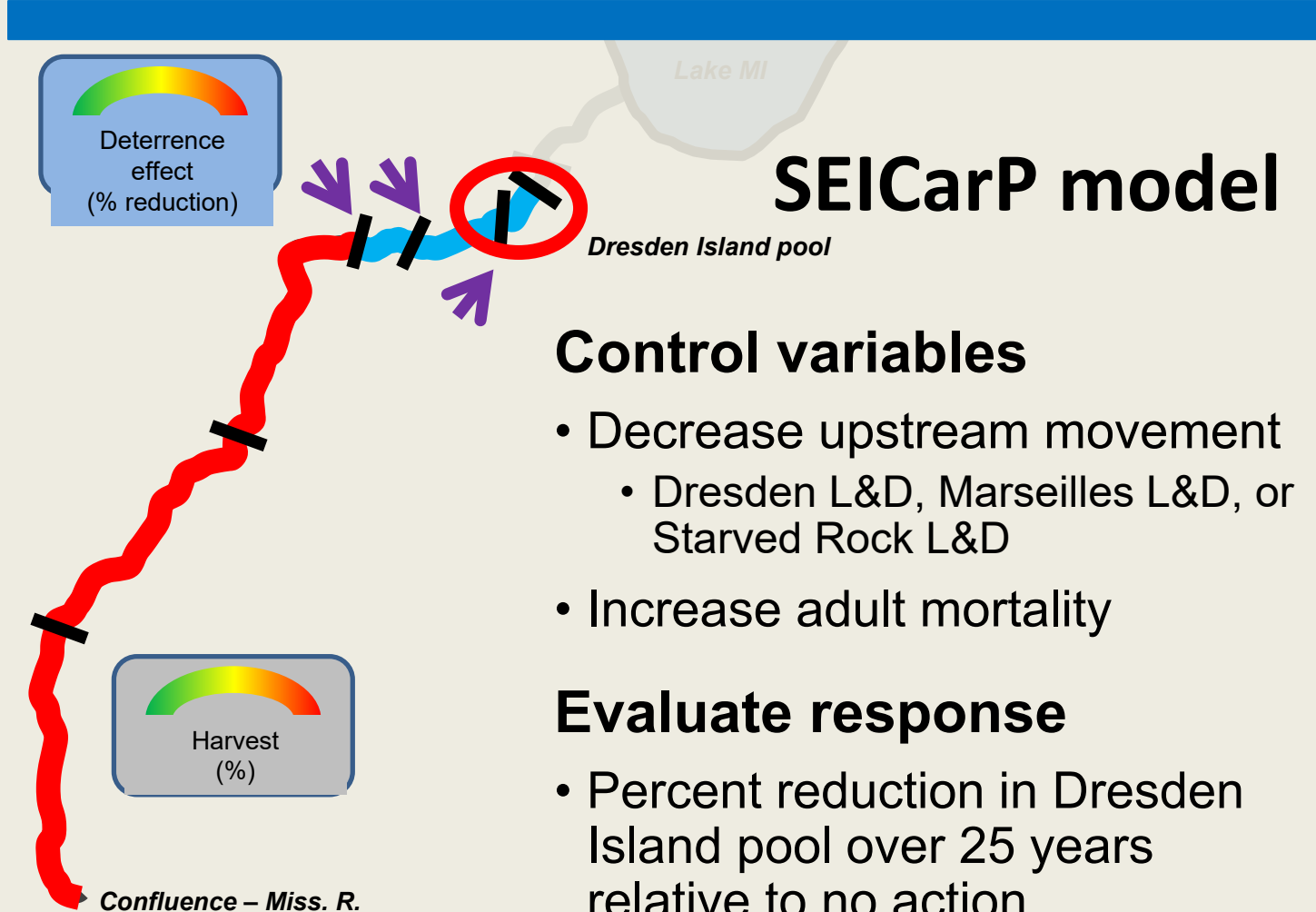
Only by coordinating across Agencies and geography do we anticipate success in managing these species to our best ability across the basin

Illinois and partners
efforts are necessary:
Great Lakes
Mississippi River
Ohio River



Figure 11. Characterization of current (2017) relative abundance of Bighead Carp and Silver Carp in the UMRB, ORB, and IWW/CAWS

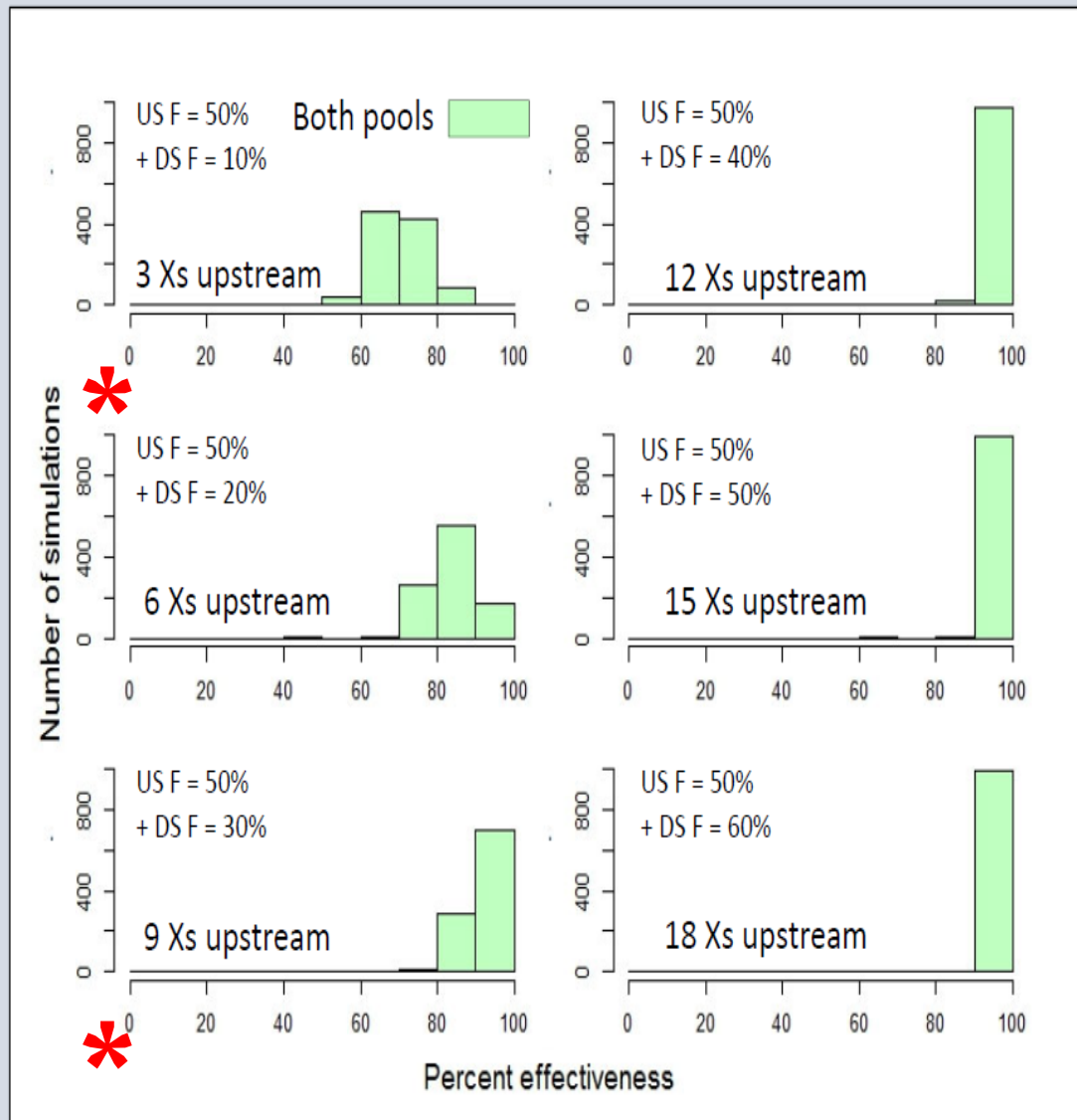
Spatially explicit invasive Carp population (SEICarP) model



Results: increase adult mortality

Considering harvest as a major contributor to mortality expressed in SEiCarP modeling

- Probability of *preventing* arrival at control point (upstream extent) when DS is 4-6 times upstream (actual harvest is ~ 4x DS:US)
- Achieving management Goals of 10-20 M lbs removed could predict the prevention of arrival at the upstream extent as more likely than not



Illinois River

A marketing summit in 2010 echoed recent findings

Commercial harvest Incentives Market development



<http://agricultureguide.org/fishmeal-plants/>

http://www.bombayharbor.com/Product/10959/The_Fish_Meal.html

Unified fishing and coordination with the most successful fishers e.g Illinois fishers, Wade Robbins (KY)



Unified Method Results

- Over 80% of carp have been removed from waters during these events
- Labor intensive thus cooperation and receptive market is necessary for large catches



Only through vibrant economic support can these tools be used to protect our waters throughout the basin, to the benefit of our rivers. Many agricultural programs have reached the same conclusion. (100% fish)

We have
partners
around the
world to
increase
valuation
of this fishery

ICELAND OCEAN CLUSTER

FEBRUARY 2021

100% ASIAN CARP



PREPARED AND PRESENTED BY

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CONTENTS

01 INTRODUCTION

02-04

ALTERNATIVES FOR
UTILIZING THE SILVER
CARP INTESTINES
METHODS
RESULTS & NEXT STEPS

05

DRYING THE SILVER CARP
METHODS
RESULTS & NEXT STEPS

06

FILLETING THE SILVER
CARP
METHODS
RESULTS & NEXT STEPS

08

MINCING THE SILVER
CARP
NEXT STEPS

09-11

POSSIBLE SILVER CARP
BY-PRODUCT UTILIZATION
FISH SILAGE
SWIM BLADDER
COLLAGEN

12-13

CONCLUSION
NEXT STEPS

14

REFERENCES



Invasive Carp Distribution in the United States

- Black Carp
- ▲ Bighead Carp
- ◆ Silver Carp
- Grass Carp

Data Source: U.S. Geological Survey January 2018

Invasive Carp Management in Kentucky

Joshua Tompkins

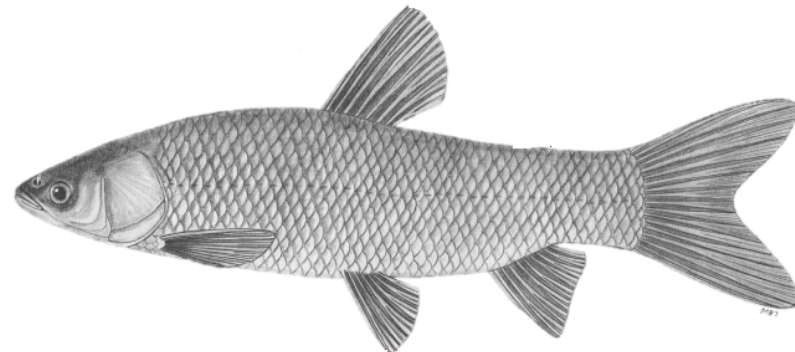
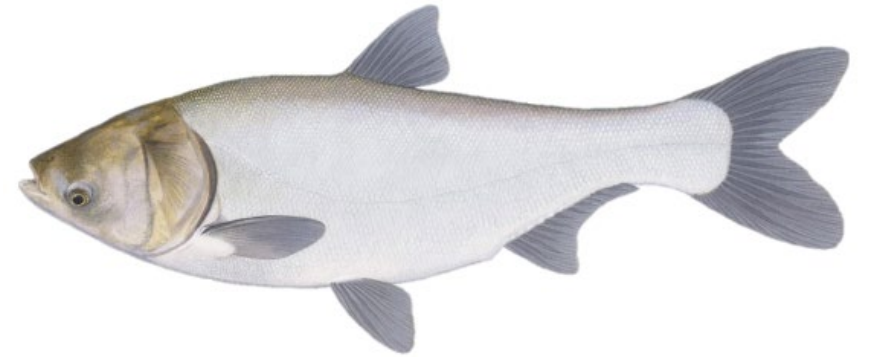
Fisheries Biologist

Kentucky Department of Fish and Wildlife Resources
(KDFWR)



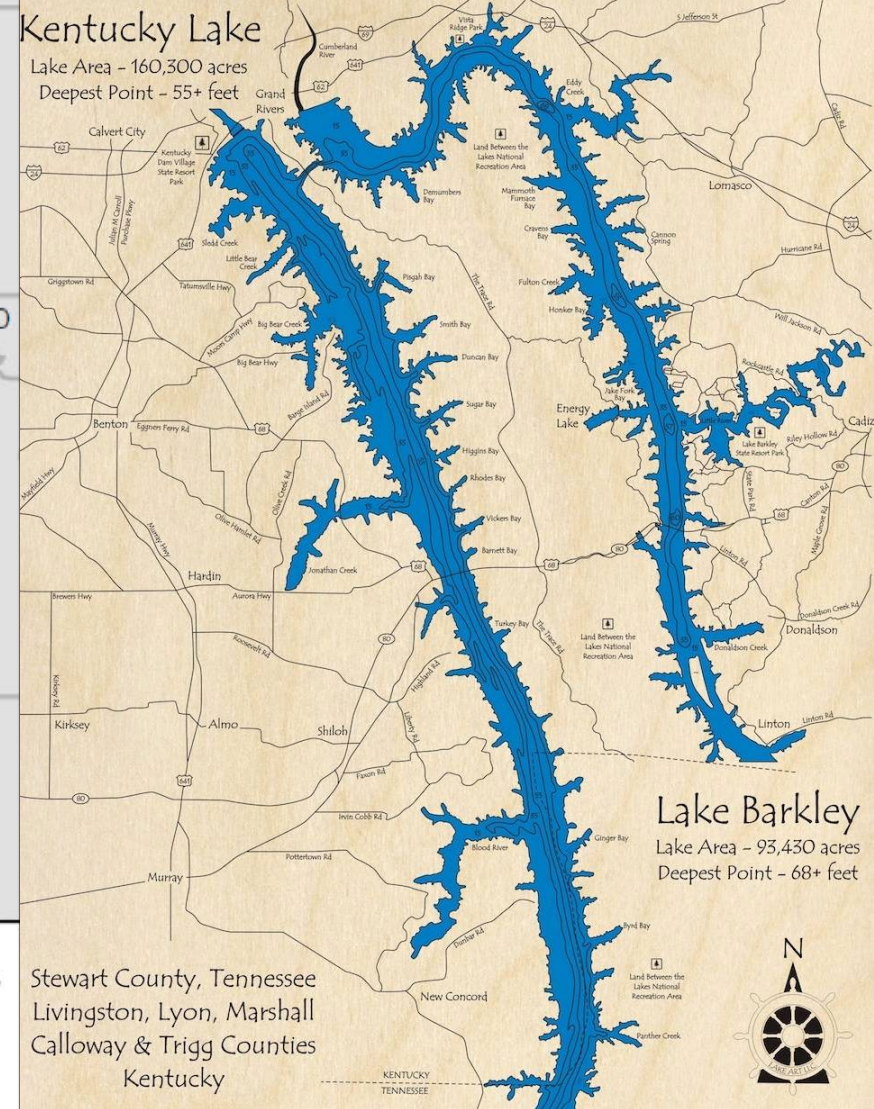
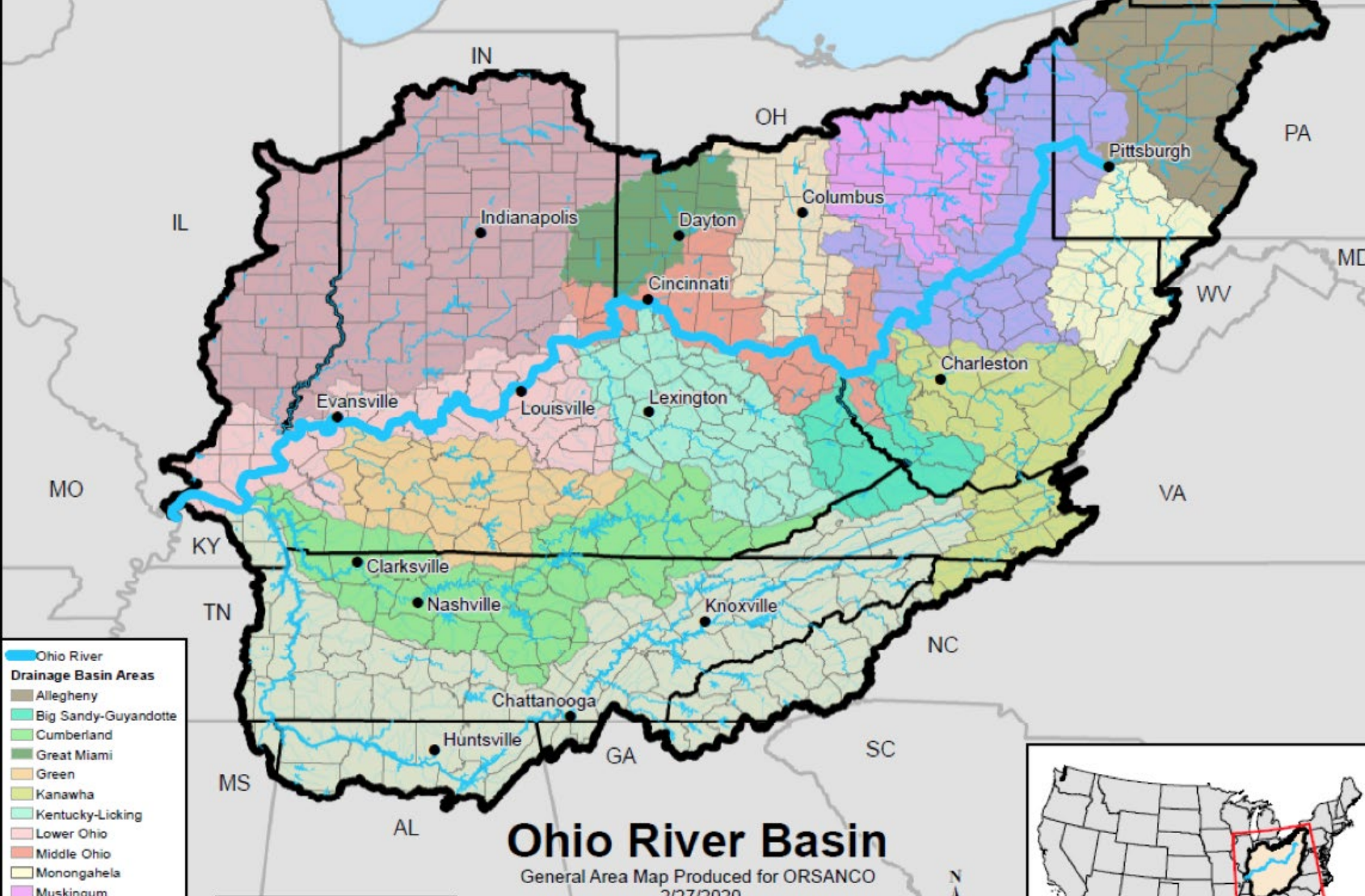
Overview:

- KFW Invasive Carp Goals
- Area of Focus
- Background
- Status as of 2021
- Future of Commercial Fishing in Kentucky
- Lessons Learned



KFW Invasive Carp Goals

- Eradication
- Prevent them from invading new waters or areas where carp have not been detected
- Reduce Invasive Carp populations in areas where they are present to minimize impacts to native fish species and other users of the waterways



Area of Focus

Carp Madness

- 2 day tournament
 - \$20,000 prize money
 - 15 commercial fishers
 - 83,000lbs bigheaded carp harvested
1. Publicity of issue
 2. Awareness of commercial industry potential
 3. Buy-in/support of recreational fishers



Photo credit: KDFWR

Commercial Harvest Since 2013

KDFWR

- Continue to update and adapt ACHP regulations
- Subsidy
- Free license
- Free ice
- Public-Private-Partnership

Commercial Fishers

- Increase in number
- Increase in effort
- Adaptation to improve efficiency
- Improved equipment

Commercial Processors

- Increase in number
- Market diversification

Bowfishing

- Regulation change in 2019 to allow sale of invasive carp harvested by any legal fishing method
- Over 300,000 lbs harvested and sold in 2021
- Used for Fertilizer or Fish Meal products



Contract Fishing

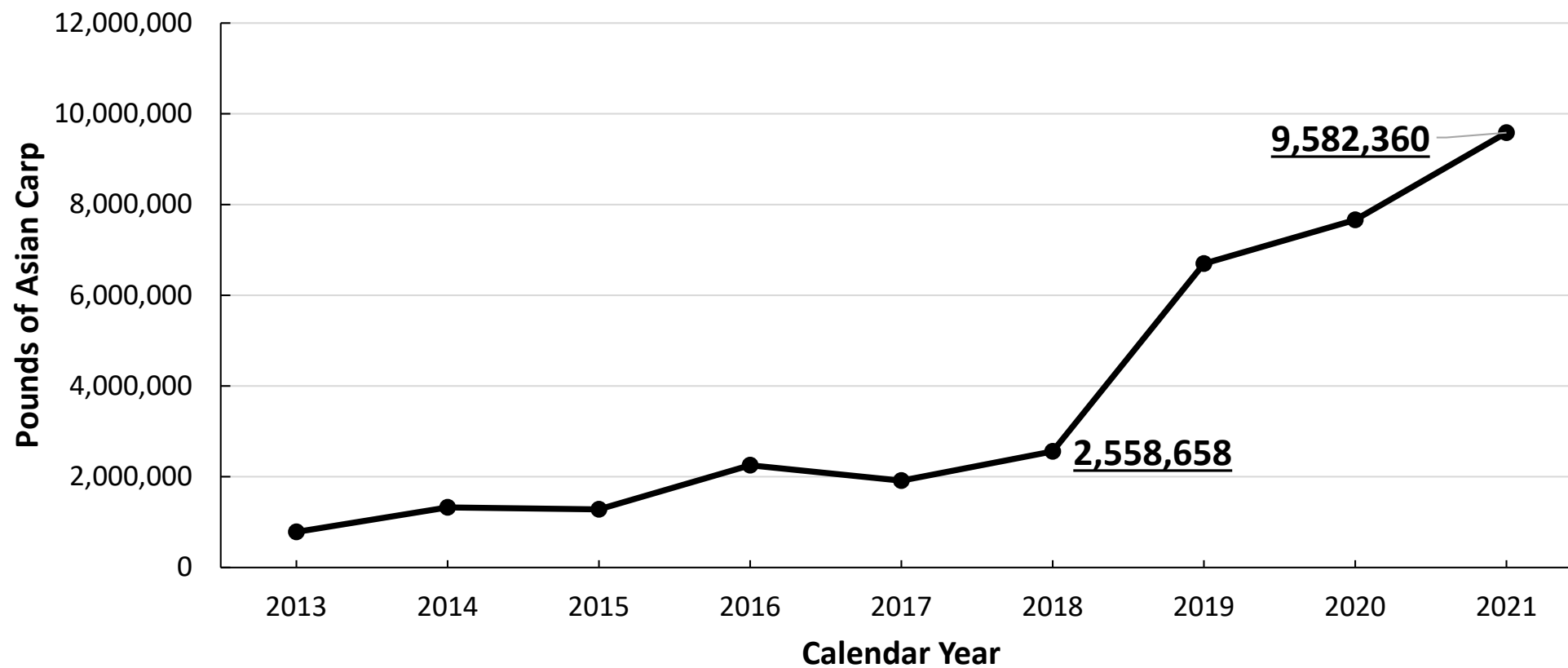
- Areas with low or no commercial fishing
 - Alternative to agency removal
- Tap into existing commercial fishing resources
 - Recruiting from other areas
- Benchmark for past season 250,00lbs
 - 337,000lbs removed

2021

- 9.58 million pounds harvested (statewide)
 - ~\$646,000 of subsidy paid out
- 43 commercial fishers on ACHP
- 3,534 Days of Effort
- 9 processors buying KY caught Invasive carp
- KY Invasive carp being used for a wide variety of products and marketed both domestically and exported



Kentucky Statewide Commercial Harvest of Invasive Carp



Future of Commercial Fishing in Kentucky

- Continue our partnership with commercial fishers
 - Update ACHP regulation as warranted
- Continue Subsidy program
- Partnering with Murray State University's Center for Economic and Entrepreneurial Development
- Experimental Methods Contract Program

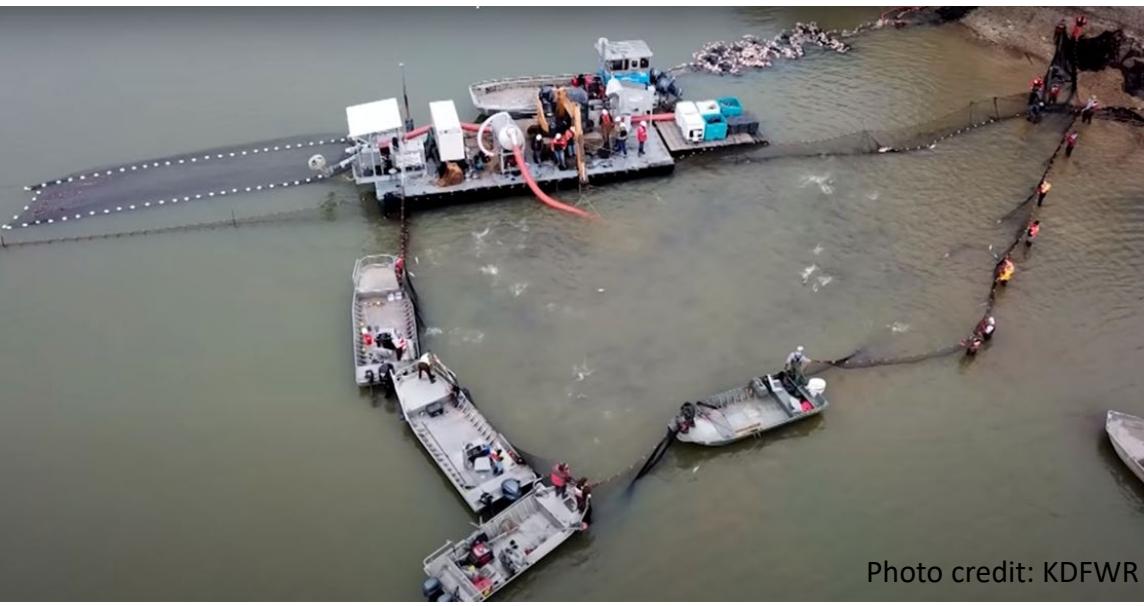


Photo credit: KDFWR



Photo credit: KDFWR

Experimental Gears project

- One active participant, Robbins Construction
 - Removal from TNCR
 - 238,351 lbs. over 16 days (14,896 lbs./day)
 - Removal from Ohio River
 - 56,271 lbs. over 4 days (14,067 lbs./day)
 - Removal from Mississippi River
 - 501,637 lbs. over 20 days (25,081 lbs./day)



Lessons Learned / Take Aways

- Open communication and strong partnership between state agency and commercial fishers
- Approval / Buy-in from the public
- Development of processing facilities or transportation to processors
- Other incentives often required to entice commercial fishers
- Consider what neighboring states are doing
- State agency must remain flexible



Questions?



Joshua Tompkins
Phone: 270-226-4192
Email: joshua.tompkins@ky.gov

Photo credit: KDFWR

TCHIP

Tennessee Carp Harvest Incentive Program



Eric Ganus, Commercial Fishing Coordinator
Tennessee Wildlife Resources Agency



Program History:

- In December 2017, I was asked to create a way for the Tennessee Wildlife Resources Agency (TWRA) to purchase carp through an incentive-based program.
- I contacted the Department of General Services Central Procurement Office (CPO) for guidance on contracts. The Delegated Authority (DA) process was selected because of both its flexibility and ease of use.
- For our State, a Delegated Authority authorizes a State Agency to purchase goods or services or execute contracts for the specified program within the limits, guidelines, and conditions specified within the approved Delegated Authority.
- The program was created and implemented in September 2018 (FY19).



Scope of Services: limits, guidelines, and conditions

- A.1. The Contractor shall be a resident wholesale fish dealer providing all goods or services and deliverables as required, described, and detailed below and shall meet all service and delivery timelines as specified by this Contract.
- A.2. The Contractor shall solicit licensed commercial fisherman to enroll in the Tennessee Carp Harvest Incentive Program (TCHIP). The contractor shall provide ice to commercial fishermen participating in the TCHIP.
- A.3. The Contractor shall provide each newly enrolled commercial fisherman's TWRA ID #, name, address and telephone number to the State by close of business at the end of week.



Scope:

- A.4. The Contractor shall only partner with commercial fishermen that have a valid resident or nonresident commercial fishing license from Tennessee.
- A.5. The Contractor must pay a minimum price of \$0.18 per pound for fish greater than eight pounds (8 lbs.) to commercial fishermen for carp purchased for TCHIP. The Contractor must pay a minimum price of \$0.15 per pound for fish less than eight pounds (8 lbs.) to commercial fishermen for carp purchased for TCHIP.



Scope:

- A.6. The Contractor shall provide invoices from purchases of silver, bighead, black, and grass carp every thirty (30) days. The contractor shall only submit reimbursements from silver, bighead, black, and grass carp purchased by the contractor that were:
 - a. Harvested from Kentucky, Pickwick, Barkley, Cheatham, and Old Hickory reservoirs;
 - b. Received by the Contractor at the Contractor's place of business located within the State of Tennessee; and
 - c. Weighed by the Contractor at the Contractor's place of business located within the State of Tennessee.



Scope:

- A.7. Upon request, the Contractor must provide all records of purchases submitted to TCHIP for reimbursement as well as all financial records of payments pertaining to such purchases.
- A.8. Warranty. Contractor represents and warrants that the term of the warranty (“Warranty Period”) shall be the greater of the Term of this Contract or any other warranty generally offered by Contractor, its suppliers, or manufacturers to customers of its goods or services. The goods or services provided under this Contract shall conform to the terms and conditions of this Contract throughout the Warranty Period.
- A.9. Inspection and Acceptance. The State shall have the right to inspect all goods or services provided by Contractor under this Contract.



Capacity Building

First Year (\$75,000)

- Gillnets, rope, floats

Year 2.5 (\$400,000)

- Freezer/Cooler, forklifts, totes (regular/insulated)



Market Inspections

Receiving

- Fish are sorted and weighed as described by contract

Market Check

- TWRA staff can inspect anytime

Invoices

- Used to verify daily weights and payments




Commercial Fishermen

- Monthly Commercial Fishing Report


Wholesale Fish Dealers

- Monthly Wholesale Fish Dealer Report





MONTHLY WHOLESALE FISH DEALER REPORT



PAGE _____ OF _____

Month: _____ Year: _____

☐ I did not receive fish or turtles this month.
☐ I did not purchase fish or turtles this month.

Date Product Received	Seller's Name	License Number And State	State of Harvest	Pounds Of Fish Received/Purchased												ROE FISH ONLY				
				Blue Catfish	Channel Catfish	Florida Catfish	Southern Catfish	Black Bass	White Perch	Common Carp	Silver Carp	Yellow Perch	Gold Carp	Other (specify)	Paddlefish	Bowfin	Swordgrass Surgeon	Exotic Fish Harvest Permit Number		

I understand that it is a violation of T.C.A. 39-16-502 to willfully make a false report. In the event the report is proven false, the information may be provided to the District Attorney for possible prosecution.

Box A: I certify that this is a true and accurate record of my transactions.

Wholesale Fish Dealer Name (Print)

Wholesale Fish Dealer Signature


Wholesale Fish Dealer TWRA ID #

Date


White copy to be sent to TWRA

Yellow copy to be retained by Wholesale Fish Dealer

WR-0665 (Rev. 10/17)



Tennessee Wildlife Resources Agency
 Ellington Agricultural Center
 Attention: Eric Ganes – Fisheries Division
 5107 Ellington Pike
 Nashville, TN 37211



Monthly Commercial Fishing Report

"Please make sure you are filling out the correct form."

This report must be completed daily and submitted monthly if you have a Tennessee commercial fishing license, even if you did not harvest fish. Failure to comply is a misdemeanor punishable by up to a \$500 fine and/or 6 months in jail. If you harvested commercial red fish you should report that harvest on the daily commercial red fish harvest report. Please contact TWRA at 615-781-6575 if you have any questions about how to report your harvest.

INSTRUCTIONS

- All reports must be submitted to TWRA by the 15th of the month following the month which is being reported. For example, the report for the fish harvested in July is due to TWRA by August 15.
- When mailing, fill the form where indicated (on the back cover), staple or tape shut, stamp and mail to the address provided.

Box A. Certification of Harvest (Gray Box)

1. If you have a valid current license year? TWRA Type 100 (Annual Resident Commercial Fishing Sector), Type 101 (Resident Commercial Fishing License) or Type 103 (Non-resident Commercial Fishing License):

a. Provide your TWRA ID number.

b. Print your name and month of harvest.

c. Sign and date.

PLACE
STAMP
HERE

Commercial Fishing Harvest

1. If you did not harvest fish during this month:

- a. Check the box on the inside of this report to indicate that you did not harvest fish during the month.
- b. Mail to the address provided.

2. If you harvested fish during this month, follow the instructions below for each day that you fished:

- a. Write the date that you checked your gear (not the day that you set the gear) under the column titled "Date".
- b. Mark the waterbody in the box next to the date. If you fished two waterbodies on the same day, then complete a separate line for each waterbody.
- c. Record the number of sets of nets you used each day under the column labeled with the appropriate gear type. If you fished two gear types on the same day, then complete a separate line for each gear type.
- d. Record the total pounds of each species that you harvested. We are only interested in the fish you harvested. Do not report fish that you released.
- e. Record, in pounds, the amount of product sold, kept, or given away under the appropriate heading.
- f. If you sold to a wholesale dealer, provide the wholesale dealer's name.
- g. Fill the form where indicated (on the back cover), staple or tape it shut, and send it to TWRA.

Tennessee Wildlife Resources Agency
 Ellington Agricultural Center
 Attention: Eric Ganes – Fisheries Division
 5107 Ellington Pike
 Nashville, TN 37211

PLACE
STAMP
HERE

Box A. Certification of Harvest (Gray Box)

1. If you have a valid current license year? TWRA Type 100 (Annual Resident Commercial Fishing Sector), Type 101 (Resident Commercial Fishing License) or Type 103 (Non-resident Commercial Fishing License):

a. Provide your TWRA ID number.

b. Print your name and month of harvest.

c. Sign and date.

Commercial Fishing Harvest

1. If you did not harvest fish during this month:

- a. Check the box on the inside of this report to indicate that you did not harvest fish during the month.
- b. Mail to the address provided.

2. If you harvested fish during this month, follow the instructions below for each day that you fished:

- a. Write the date that you checked your gear (not the day that you set the gear) under the column titled "Date".
- b. Mark the waterbody in the box next to the date. If you fished two waterbodies on the same day, then complete a separate line for each waterbody.
- c. Record the number of sets of nets you used each day under the column labeled with the appropriate gear type. If you fished two gear types on the same day, then complete a separate line for each gear type.
- d. Record the total pounds of each species that you harvested. We are only interested in the fish you harvested. Do not report fish that you released.
- e. Record, in pounds, the amount of product sold, kept, or given away under the appropriate heading.
- f. If you sold to a wholesale dealer, provide the wholesale dealer's name.
- g. Fill the form where indicated (on the back cover), staple or tape it shut, and send it to TWRA.


I understand that it is a violation of T.C.A. 39-16-502 to willfully make a false report. In the event the report is proven false, the information may be provided to the District Attorney for possible prosecution.

Box A: I certify that this is a true and accurate record of my commercial harvest and disposition information.

TWRA ID #: _____

Name (print) _____ Month _____

Signature: _____ Date: _____




WB 0897
Rev. 10/73

Vendors Requirements

- Monthly TCHIP Invoice
- Bill of Lading (Daily Receipt)
- Monthly Wholesale Fish Dealer Report

[illegible]



Commercial Fishing Report

"Please make sure you are filling out the correct form."

This report must be completed daily and submitted monthly if you have a Tennessee commercial fishing license, even if you did not harvest fish. Failure to comply is a misdemeanor punishable by up to a \$500 fine and/or 6 months in jail. If you harvested commercial roe fish you should report that harvest on the daily commercial roe fish harvest report. Please contact TWRA at 615-781-6575 if you have any questions about how to report your harvest.

INSTRUCTIONS

- All reports must be submitted to TWRA by the 15th of the month following the month which is being reported. For example, the report for the fish harvested in July is due to TWRA by August 15.
- When mailing, fill the form where indicated (on the back cover), staple or tape shut, stamp and mail to the address provided.

FOLD HERE

PLACE
STAMP
HERE

FOLD HERE

Box A. Certification of Harvest (Gray Box)

101 (Resident Commercial Fishing License) or Type 103 (Annual Residential Commercial Fisherman's License), Type 103 (Resident Commercial Fishing License) or Type 103 (Non-resident Commercial Fishing License):

- Print your TWRA ID number.
- Print your name and month of harvest.
- Sign and date.

Commercial Fishing Harvest

- If you did not harvest fish during this month:
 - Check the box on the inside of this report to indicate that you did not harvest fish during the month.
 - Mail to the address provided.
- If you harvested fish this month, follow the instructions below for each day that you fished:
 - Write the date that you checked your gear (not the day that you set the gear) under the column titled "Date".
 - Put the waterbody in the box next to the date. If you fished two waterbodies on the same day, then complete a separate line for each waterbody.
 - Record the number of sets you used each day under the column labeled with the appropriate gear type. If you fished two gear types on the same day, then complete a separate line for each gear type.
 - Record the total pounds of each species that you harvested. We are only interested in the fish you harvested. Do not report fish that you released.
 - Record, in pounds, the amount of product sold, kept, or given away under the appropriate heading. If you sold to a wholesale dealer, provide the whole dealer's name.
 - Fill the form where indicated (on the back cover), staple or tape it shut, and send it to TWRA.

FOLD HERE

I understand that it is a violation of T.C.A. 39-16-502 to willfully make a false report. In the event the report is proven false, the information may be provided to the District Attorney for possible prosecution.


Box A: I certify that this is a true and accurate record of my commercial harvest and disposition information.

TWRA ID #.

Name (print) _____

Signature _____

Month _____ Date _____

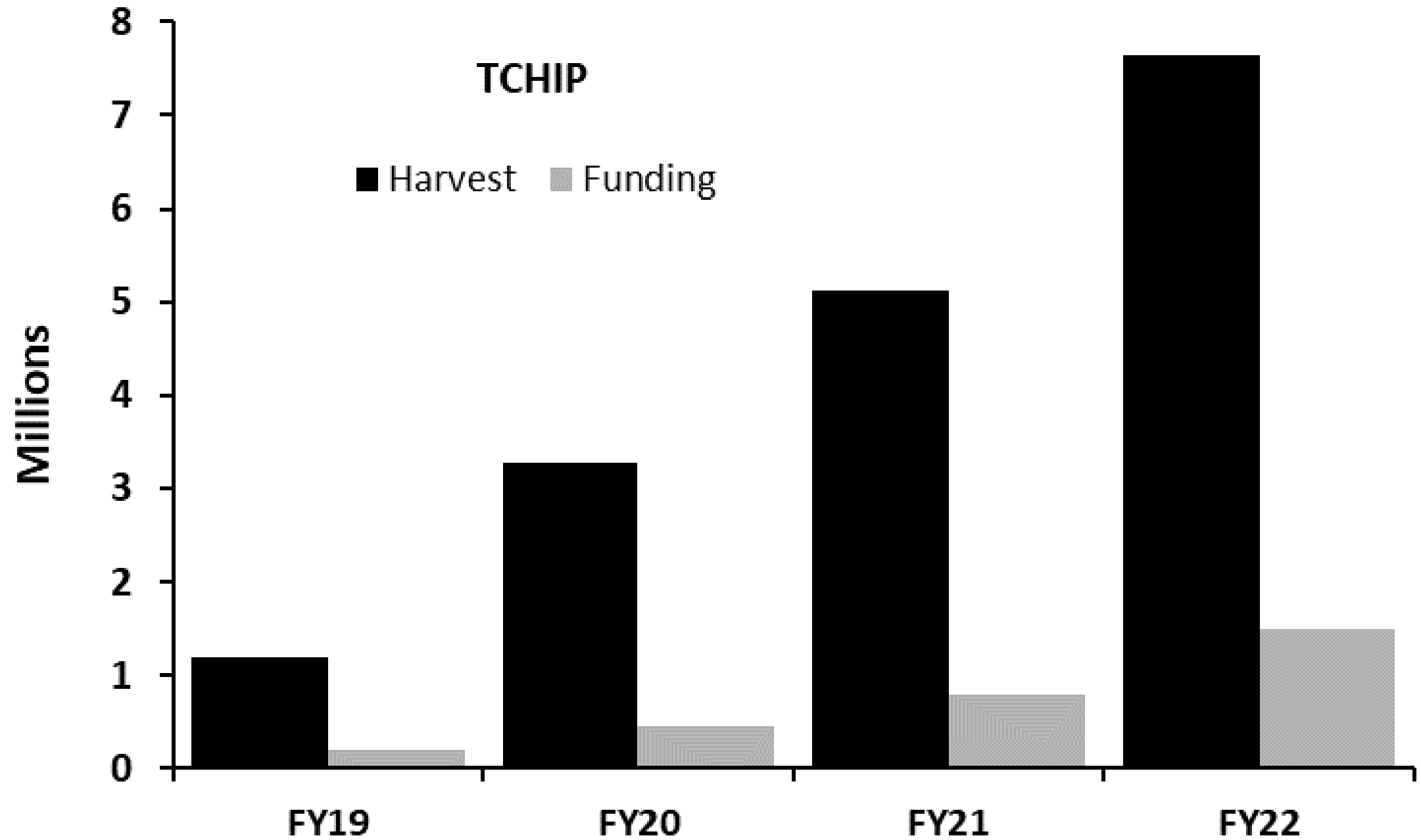


WE 0897
(Rev. 10/77)

Market Uses and Products

- Bait
- Bone Meal
- Fresh/Frozen





Questions?

Eric Ganus
Commercial Fishing Coordinator
TWRA

615-781-6579

eric.ganus@tn.gov





DISCUSSION

1. What are the current opportunities for increased use of invasive carp?
2. What are the challenges to expeditiously shipping sufficient product from commercial fishers to processors?
3. What are the operational and logistical challenges to ensuring consistent supply of high-quality fish for human and non-human consumption?
4. What programs or opportunities exist to address food security needs that can be supported with invasive carp harvest?