CHAPTER 2. FISH STOCKING POLICY

INTRODUCTION

In many instances a successful fishing trip is dependent upon a stocking program. To this end, the Iowa Department of Natural Resources expends approximately 40% of the funds allocated to the Fisheries Bureau for fish culture and propagation.

Much effort and money is expended to produce hatchery fish and it is imperative that these fish be used prudently. The fish stocking policy is being established to insure beneficial use through standardized statewide stocking rates and to acquaint new biologists with the most beneficial species and stocking rates to use in various circumstances. Rathbun Hatchery's HACCP plan for preventing the stocking of non-target species is included in Appendix 1 and Appendix 2.

AUTHORIZED USES OF HATCHERY FISH

Hatchery reared and stocked fish are beneficially used in one or a combination of seven categories (Table 1). These include: 1) after initial impoundment, renovation, or winterkill; 2) to alter the forage web; 3) to provide a put-and-take fishery; 4) to provide a trophy fishery; 5) for population maintenance; 6) to improve the genetic integrity of fish stocks; and 7) aquatic vegetation control. Each situation is discussed in more detail.

1. *Stocking Following Initial Impoundment, Renovation or Winterkill.*

Stocking new or renovated waters is obviously necessary to develop a desirable sport fishery. The initial stock should be of a magnitude that will provide angler harvest and brood stock for future propagation. Nearly all of the fish produced by hatcheries are available for this type of stocking. The primary consideration is to stock species suited to the available habitat.

Hatchery fish must be introduced into new or renovated waters before contamination by undesirable fish. Therefore, it is important to coordinate impoundment or renovation with hatchery fish availability (Table 2).

Winterkill presents a special fish stocking problem because fish mortality is usually incomplete and other fish management techniques are normally required to create a balanced fish population. Fish stocking and other management techniques must be integrated with particular reference to winterkill severity, documented winterkill frequency, and projected fishing pressure.

In areas where winterkill occurs more frequently than once/5 years, only largemouth bass or northern pike stocking will be approved.

2. *Stocking to Alter the Forage Web.*

Many fish communities do not effectively utilize available forage. Introduction of a species which will augment this community also benefits the sport fishery. An optimum candidate species is one that will maintain itself once established; however, because aquatic forage webs are complex, consideration should be given possible adverse effects upon the existing sport fishery.

Gizzard shad, emerald shiners, or other prey species, and flathead catfish, hybrid striped bass and white bass may be used to alter the forage web in a body of water.

3. Put-And-Take Stocking.

Put-and-take stocking is the most intensive and expensive stocking method. It should be conducted only when the following conditions are met:

A. The introduced species is the only sport fishery the resource will support.

B. Successful natural reproduction of the introduced species does not occur or is inadequate to sustain a fishable population.

C. The receiving water provides the stocked species with adequate habitat for survival and natural food for maintenance.

D. Angler pressure far exceeds the ability of the water to provide a harvestable population.

E. The introduced species lends itself to intensive culture at a reasonable cost and is highly susceptible to angling.

In Iowa, coldwater streams and selected urban waters are the only resources presently available that meet all of the above criteria. The goal of put-and-take stocking is to provide a sustained fishery. To prevent "boom and bust" fishing success, small plants of fish are made at frequent intervals. Put-and-take stocking involves rearing the fish to catchable size and making a large number of plants; thus, anglers that utilize the resource are typically required to purchase a special fee to support the added expense of the stocking program.

4. *Trophy Fish Stocking*.

Fishery Management biologists are responsible for recommending trophy fish introductions. When considering a trophy fish candidate, ability to reproduce is of little importance, but good survival and rapid growth to a large size are paramount criteria as is the ability of hatcheries to produce the candidate. Trophy fish are usually maintained by stocking small numbers of large fingerlings.

Production of fingerling trophy fish is quite costly and cannot be wholly justified through cost benefit evaluation. However, there is an intangible aesthetic value to fisherman knowing that catching a trophy fish is possible and the intangible value to the Department in publicity when a trophy fish is creeled.

Muskellunge and striped bass hybrids are currently used in Iowa as trophy fish.

Because trophy fish introductions are costly and may be controversial, approval from the Fisheries Chief is required before new trophy fish programs are implemented.

5. *Maintenance Stocking*.

Maintenance stocking can be beneficial when natural reproduction is inadequate to sustain a fishable population, providing the habitat is suitable for growth and survival. The species must be highly sought by anglers. Walleye stocking is a good example of a beneficial maintenance stocking program. This species is highly sought by anglers, natural reproduction is insufficient to sustain the fishery but the habitat lends itself to good growth and survival.

The Department provides channel catfish to numerous County Conservation Boards for cage rearing in waters under their jurisdiction that are under fish management agreements with the Fisheries Bureau. This is a specialized type of maintenance stocking that nearly simulates a put-and-take fishery. This cooperative program is beneficial to the Department because of lower fish production expense, but greater benefits come from public relations and periodic contacts the management biologist maintains with each participating County Board.

Maintenance stocking to augment existing fish populations is very costly. Historically, maintenance stocking programs have been the most overused of all rationale for stocking. Because of the expense and the sometimes questionable results obtained, the management biologist should closely investigate each body of water in which maintenance stocking is anticipated. All maintenance stocking must receive prior approval from the Fisheries Chief.

Channel catfish, walleye, largemouth bass, northern pike, brook, brown, and rainbow trout have been used for maintenance stocking programs.

6. Stocking to Biologically Remove Aquatic Vegetation.

Grass carp have been experimentally introduced into selected waters throughout Iowa. These fish consume large quantities of vegetation and when stocked in adequate numbers control submerged vegetation. Although grass carp effectively control vegetation, they are not a cure-all and will not correct other serious fish management problems.

7. *Stocking to Improve the Genetic Diversity*.

Research has shown in several situations where the stocking of genetically different stocks have resulted in improved survival and/or natural reproduction of the target species. Propagation of French Creek brown trout and South Pine brook trout from wild populations and stocking the resultant fingerlings in other suitable coldwater streams have resulted in significantly improved survival and/or the development of self-sustaining populations. Research has also documented improved survival rates of Mississippi River strain walleye in eastern Iowa interior rivers when compared to the use of Spirit Lake strain. Management and Research staffs should consider the potential influence genetics can have on survival, growth and natural reproduction of all species being considered for stocking; and minimize, where practical, the mixing/contamination of genetic strains.

STOCKING GUIDELINES FOR INDIVIDUAL SPECIES

BLUEGILL

1. Bluegill may be stocked in all new or renovated lakes, impoundments and reservoirs.

2. Autumn or spring plants of 1”+ fingerling will be utilized.

3. Stocking density will not exceed 1,000 fish/acre in waters < 500 surface acres and will not exceed 500/acre in waters > 500 acres.

4. Spring impoundment of new waters will necessitate stocking adult fish.

5. Management biologists will be responsible for collecting and transporting adult bluegill.

CHANNEL CATFISH

1. Two inch (2”) channel catfish may be stocked in all new or renovated lakes and impoundments at a rate not to exceed 100/acre.

2. Maintenance stocking will be accomplished using 7”-10” fingerling. Annual stocking will not exceed 28/acre in waters < 100 acres, 20/acre in waters 100-250 acres, 7/acre in waters 250 – 1,000 acres, 3/acre in waters >1,000 acres. Waters < 10 acres shall be stocked every other year at 56/acre.

3. Fish used in County Conservation cage programs will be at least 4" fingerling. Annual stocking density will not exceed 100/acre in lakes < 25 acres, 75/acre in lakes 25-50 acres, and 50/acre in lakes >50 acres.

4. Maintenance stocking of channel catfish in all Iowa rivers is generally prohibited. Stocking of 2" fingerling is permissible following severe winterkill or pollution caused mortality. Stocking rate will not exceed 250/acre.

CRAPPIE (WHITE AND BLACK)

1. Adult crappie may be stocked in lakes.

2. Management biologists will be responsible for collecting and transporting adult crappie for stocking.

3. Fingerling crappie will not be propagated in the fish hatcheries.

GIZZARD SHAD

1. Adult gizzard shad may be introduced as a forage base into water >1,000 acres.

2. Management biologists will collect and transport adult shad for stocking.

GRASS CARP

1. Stocking density will not exceed 10 fish/acre.

2. Size of fish at stocking should be 8 – 10 inches.

3. Depending upon hatchery production, grass carp should be stocked as early in the summer as possible to utilize the available food supply so maximum growth will occur during the first summer.

4. Restocking at a reduced level is recommended when necessary to maintain desired vegetation control

5. Grass carp will be restricted from natural lakes or other lakes where the long-term effect of vegetation control on water quality and phytoplankton blooms is uncertain.

6. Grass carp may be stocked in new or renovated lakes only with approval of the Fisheries Chief.

LARGEMOUTH BASS

1. Largemouth bass will be stocked two consecutive years in all new or renovated lakes, impoundments, and reservoirs as 1-2 inch fingerlings.

2. Stocking rates will be as follows:

	1st Year	2nd Year
Surface area < 500 acre	70-100/acre	100/acre
Surface area > 500 acre	35-50/acre	50/acre

3. Stocking of large fingerling (5") bass will be limited to experimental projects conducted by either research or management biologists or where minimal largemouth bass recruitment is documented.

4. 5" LMB may be stocked in the fall in new or renovated lakes not to exceed 5/acre.

MUSKELLUNGE

1. Muskellunge introductions will be limited to Big Creek, Brushy Creek, Clear Lake, Hawthorn, Lake MacBride, Lost Grove, Pleasant Creek, Spirit Lake, Three Mile, and West Okoboji.

2. Stocking will consist of 10" fingerlings stocked at a rate not to exceed ½ per acre.

3. Spring stockings should be used whenever possible.

NORTHERN PIKE

1. Fingerling (2"-3") northern pike may be stocked in any lake >40 acres that contains an existing fish population. Stocking density may not exceed 5/acre.

2. Northern pike fry may be stocked following winterkill at a density of 1,000/acre.

3. Northern pike will not be stocked in waters containing muskellunge.

4. Northern pike fry may be stocked in inland streams at a rate not to exceed 1,000/acre.

5. Fingerling (2"-3") northern pike may be stocked in riverine systems. Stocking rate may not exceed 5/acre.

SMALLMOUTH BASS

1. Smallmouth bass stocking should generally be confined to streams.

2. Prior approval from the Fisheries Chief is required before any lake stockings.

3. Smallmouth bass will be stocked only following severe winterkill, a pollution event, or new lake situations if the community structure warrants this introduction.

4. Stocking rate for swim-up fry will not exceed 50/acre.

5. Stocking rate for 2" fingerling should not exceed 5/acre.

STRIPED BASS HYBRIDS

1. Striped bass hybrid introductions should be limited to on-stream reservoirs of more than 5,000 acres and the Mississippi River.

2. The Fisheries Chief must approve introduction of striped bass hybrids into any other waters.

3. Fingerling (1"-2") will be stocked at a density not to exceed 10/acre.

TROUT (BROOK, BROWN AND RAINBOW)

1. Put-and-take

    a. Stocking quotas and species will be determined by management and hatchery biologists primarily as a function of angler pressure, with habitat quality and quantity a secondary criteria.

The put-and-take stream stocking program should begin near April 1 and conclude no later than the end of November.

b. Put-and-take trout should not be stocked in waters that already support self-sustaining populations of that particular species.

c. Walk-in and lightly fished streams should be stocked no more than once each week. Most heavily fished streams should be stocked at least twice a week.

d. Put-and-take trout may be stocked in urban waters between November and March to create urban winter trout fisheries. New urban put-and-take trout fisheries require the approval of the Fisheries Chief.

2. Put-and-grow

a. Designated put-and-grow trout streams should be stocked annually with fingerling (2”-4”) brown or brook trout at density commensurate with the habitat quantity and quality as determined by the management biologist.

b. Fingerling trout should not be stocked into waters that already support self-sustaining populations of that particular species.

c. All requests for fingerling brown trout should be for first generation (F_1) progeny of wild brown trout.

d. Fingerling brook, brown, and rainbow trout may be stocked into put-and-take and special trout streams when such stockings have shown contribution to the adult population.

WALLEYE

1. Walleye fry and fingerling will usually not be stocked in the same lake during a single season.

2. Walleye fry will be stocked in natural lakes at the following or lower rates :

3,000 – 4,500/acre in lakes > 1,500 acres
3,000/acre in lakes < 1,500 acres

3. Walleye fry stocked in flood control reservoirs will be planted at a rate not to exceed 1,000/acre.

4. Walleye fry stocking in other impoundments will be planted at a rate not to exceed 3,000 acre.

5. Walleye fingerling (2”) may be stocked in appropriate interior rivers at a rate of 400/mile at a stream drainage area of approximately 1,200 square miles. Stocking rates should be adjusted appropriately for rivers with smaller or larger watersheds. Interior rivers in the Mississippi River drainage should receive Mississippi River strain fingerlings whenever possible.

6. Walleye fingerling stocking may occur only when it is documented that fry plants are unsuccessful.

7. Walleye fingerling stockings may be made in lakes > 500 acres.

8. Walleye fingerling (2”) stocking rate should be no more than 15/acre in flood control reservoirs and no more than 30/acre in other impoundments.

9. Large (4”-8”) walleye fingerling stockings should be between 10 -30/acre, with greater numbers stocked in waters that have high fishing pressure.

WHITE BASS

1. White bass may be introduced as adults into lakes with suitable habitat.

2. White bass should not be introduced unless gizzard shad or similar forage are present.

MISCELLANEOUS FISH SPECIES

1. Any fish species not listed in these guidelines will need prior approval from the Fisheries Chief.

Table 1. Authorized stocking programs by fish species.

SPECIES	NEW, RENOVATED OR WINTERKILL WATERS	ALTER FORAGE WEB	PUT-AND-TAKE	TROPHY	MAINTENANCE	GENETIC INTEGRITY	AQUATIC VEGETATION CONTROL
Bluegill	X						
Brook trout			X		X	X	
Brown trout			X		X	X	
Channel catfish	X		X		X		
Crappie	X						
Flathead catfish		X		X			
Gizzard shad		X					
Grass carp							X
Largemouth bass	X				X		
Muskellunge				X			
Northern pike	X				X		
Rainbow trout			X		X		
Smallmouth bass	X						
Striped bass hybrid		X		X			
Walleye	X				X	X	
White bass	X	X			X		

HATCHERY FISH PRODUCTION

Many successful fish stocking programs are dependent upon the hatcheries to produce specific sized fish at designated times (Table 2). Occasionally, such specific requests cannot be filled because the size of fish requested is unavailable on the requested date. This section is designed to lessen the frequency of such requests.

The following table indicated the size and month fish are available from Iowa hatcheries:

Table 2. Availability of hatchery produced fish by size and month.

SPECIES	SIZE	AVAILABILITY
Bluegill	1”-2”	October or March
Channel catfish	Fry	June
Channel catfish	2”	August
Channel catfish	6”-10”	September – October
Largemouth bass	Fry	Early June
Largemouth bass	1”-2”	Late June
Largemouth bass	5”	September
Muskellunge	10”+	October - May
Northern pike	Fry	April
Northern pike	3”	June
Smallmouth bass	3”	September
Striped bass hybrid	Fry	May
Striped bass hybrid	2”-3”	July
Walleye	Fry	May
Walleye	4”-8”	September-October
Trout	Catchable	Yearly

Table 2 does not include all of the fish or size of fish that may be stocked in Iowa waters, but it lists all those most commonly requested. The availability of species or sizes not listed can be determined by contacting the Fish Culture Supervisor.

PROCEDURE FOR FILING REQUEST FOR STATE PRODUCED FISH

1. All requests will originate with the fisheries management or research biologist, following consultation with the Regional Supervisor.

2. Fish stocking requests will be done on the Fish Stocking Request spreadsheet form.

3. The management biologist and/or research biologist will have forms completed and forwarded to the Regional Supervisor by December 15.

4. Regional Supervisor will review the requests, make appropriate corrections or changes, and forward the requests to the Fisheries Chief, with a copy to the Fish Culture Supervisor, by January 1.

5. The Fish Culture Supervisor will compile a statewide fish stocking request.

6. The Fisheries Chief and Fish Culture Supervisor will review the request for hatchery production. Consideration will be given to the production capabilities of hatcheries. If hatcheries cannot meet requests of management and research, appropriate changes will be made at this time. All changes will be made after consultation with Regional Supervisors.

7. The Fish Culture Supervisor will approve the request for hatchery production by January 15. The request approved by the Fish Culture Supervisor will include only those fish the Fish Culture Section is reasonably sure of producing or procuring from other sources.

8. Once the stockings have been approved and hatchery production assigned, a fish stocking worksheet will be compiled and circulated to all fisheries biologists by March 1. It will be each hatcheries responsibility to inform management or research biologists of fish stockings before they occur.

CHANGES IN STATE STOCKING COMMITMENTS

The Management Biologist should complete a Change Order for all changes in approved stocking commitments. The routing should be from the management or research biologist to the Regional supervisor for approval. The Regional Supervisor should then send the changes to the Fisheries Chief who will forward to the Fish Culture Supervisor. The Fish Culture Supervisor will forward the Change Order to the hatchery or hatcheries involved in the stocking change.

In case of any change in hatchery production, the Fish Culture Supervisor will inform the Fisheries Chief concerning species, number, size, and fish availability. The Fisheries Chief will contact the Research Supervisor and the Regional Supervisors who will determine from the area biologists their fish needs. Regional Supervisors and the Research Supervisor will make requests for these fish to the Fisheries Chief who will then plan distribution. In case of fish shortage, the Fisheries Chief will determine stocking priority.

PUBLIC INFORMATION STOCKING PROGRAM

The final approved fish stocking worksheet will be distributed by March 1. The area manager will be responsible for providing this information to Conservation Officers, Park Rangers, Wildlife Biologists, and other Department employees.

The management biologist will also provide information to the public through meetings if a major project is involved or to the news media.

Appendix 1. ANS-HACCP Plan – 7” Channel Catfish for stocking as sportfish in Iowa.

1) Product Description
2) Flow Diagram
3) Potential Hazards
4) Hazard Analysis Worksheet
5) HACCP Plan Form

1) Product Description

Firm Name:	Rathbun Fish Hatchery
Firm Address:	15053 Hatchery PL Moravia IA 52571
Species of fish:	7” Channel Catfish (Ictalurus punctatus) grown in lined and circulating ponds.
Cultured or wild harvested:	Cultured
Harvest method:	Drained from lined 1 acre ponds and .05 acre circulating ponds
Method of distribution and storage:	Loaded into tub with nets then craned up to truck and dumped at lake
Intended use and consumer:	To be stocked in lakes across the state of Iowa for put, grow, and take fishery

2) Flow Diagram

Step 1	Fry are obtained from Missouri DOC. Our truck goes to Chesapeake, MO State Fish Hatchery and brings back 1-2 week old catfish fry. Water source is spring water that is run through a solar pond. Water clarity is extremely high and no fish are present in water supply.

⇩

Step 2	Fry are stocked into ponds directly from truck. Some may be held in start tanks for 1-2 weeks until pond space is available.

⇩

Step 3.	Fry are fed through out the summer. Water that is added passes through 2 filters equipped with 300 micron screens. The first filter is the main hatchery inlet filter fit with .3 mm openings. The second filter is the research building filter with .3 mm openings that will be used when water is pumped to the ponds. $1.00/hour to pump, $72.00 to flush one pond. Seven inch fish that are moved to circulating ponds in March of their second year will be treated with antimycin on the truck before they are stocked in July. They also will be run across the sort table before they are loaded.

⇩

Step 4.	Antimycin – Treatment with antimycin has been discontinued due to lack of product availability.
	⇩
Step 5.	When fish are to size (7”) the pond is drained into the kettle the day before harvest.
	⇩
Step 5.	Fish are dip netted from the kettle and visually examined for foreign fish or other ANS. The hatchery crew will build a sorting table to be used in the kettle which will be operated by permanent employees. This will be the ultimate test of the filters.
	⇩
Step 6.	Fish are loaded onto trucks using crane equipped with bucket.
	⇩
Step 7.	Trucks for distribution are filled with water from tank room which has been run through sand filters (.12 mm) and UV radiation treatment. Water on the trucks can be discharged into the lakes because of this treatment.
	⇩
Step 8.	Fish are stocked at lakes, normally from boat ramps. If determined needed, Fish Management will be responsible for building cages which can be discharged into at the boat ramps. This will allow management staff to visually inspect the fish one more time before they are released into the lake. Hatchery staff will coordinate delivery schedules with management staff but both parties must realize coordination of deliveries will be tricky and should devote adequate time for this extra step.
	⇩
Step 9.	Mark Flamang will provide information to the hatchery regarding yellow bass and shad populations in Rathbun Lake so hatchery staff can chart fish detection at harvest with fish population in Lake. This will allow us to determine if our detection techniques are working.

3) Potential ANS Hazards (List relevant species)

1) ANS Fish and Other Vertebrates. Examples: Eurasian ruffe, round goby, Asian carps, non-native amphibians, etc.

   Yellow bass, gizzard shad, bluegill, crappie, Asian carp, green sunfish, orangespotted sunfish

2) ANS Invertebrates. Examples: zebra mussels, Asian clams, spiny water fleas, rusty crayfish, etc.

None known.

3) ANS Plants. Examples: Eurasian watermilfoil, hydrilla, giant salvinia, water chestnut, etc.

None known.

1) Harvest or Aquaculture Step (from flow diagram)	(2) Identify potential ANS hazards introduced or controlled at this step (1)	(3) Are any potential ANS hazards significant? (Yes/No)	(4) Justify your decisions for column 3.	(5) What control measures can be applied to prevent the significant hazards?	(6) Is this step a critical control point? (Yes/No)
Obtain fry from Missouri Department of Conservation	Fish/Other Vert. Any species other than channel catfish.	NO	Hatchery water supply is a spring not surface water.	Visual inspect Clear water	NO
	Invertebrate NA	NA	NA	NA	NA
	Plant NA	NA	NA	NA	NA
Stock fry into ponds	Fish/Other Vert. Any species other than channel catfish.	NO	No additional water added to truck during transport.	Do not add water to tanks during transit.	NO
	Invertebrate NA	NA	NA	NA	NA
	Plant NA	NA	NA	NA	NA
Add H_2O to ponds during culture season	Fish/Other Vert. Any species other than channel catfish.	YES	Eggs or fry 1/8" in diameter or less.	Smaller screen for gravity flow or pump through research 300µ screen	YES

	Invertebrate NA	NA	NA	NA	NA
	Plant NA	NA	NA	NA	NA

(1) Harvest or Aquaculture Step (from flow diagram)	(2) Identify potential ANS hazards introduced or controlled at this step (1)	(3) Are any potential ANS hazards significant? (Yes/No)	(4) Justify your decisions for column 3.	(5) What control measures can be applied to prevent the significant hazards?	(6) Is this step a critical control point? (Yes/No)
Harvest catfish from ponds	Fish/Other Vert. Any species other than channel catfish. Frog, turtles	YES	Past observation at fish harvest.	Antimycin pond prior to harvest. $500/pond	YES
	Invertebrate NA	NA	NA	NA	NA
	Plant NA	NA	NA	NA	NA
Load catfish from ponds	Fish/Other Vert. Any species other than channel catfish. Frog, turtles	YES	Past observations during loading operations	Visually inspect dip nets of fish via sort table device.	YES
	Invertebrate NA	NA	NA	NA	NA
	Plant NA	NA	NA	NA	NA
Unload catfish into lakes	Fish/Other Vert. Any species other than channel catfish.	NO	Prior control measures. No water added during transport	None required	NO

	Invertebrate				
	Plant				

(1) Harvest or Aquaculture Step (from flow diagram)	(2) Identify potential ANS hazards introduced or controlled at this step (1)	(3) Are any potential ANS hazards significant? (Yes/No)	(4) Justify your decisions for column 3.	(5) What control measures can be applied to prevent the significant hazards?	(6) Is this step a critical control point? (Yes/No)
	Fish/Other Vert.				
	Invertebrate				
	Plant				
Firm Name: Rathbun Fish Hatchery			Species of Fish: Channel Catfish		
Firm Address: Moravia, IA 52571			Cultured, wild harvested, or both: Cultured		
Signature: Date:			Intended Use and Consumer: Stocking into Iowa lakes/ponds. Anglers of Iowa.		

4) ANS-HACCP Plan Form

(1) Critical Control Point (CCP)	(2) Significant Hazard(s)	(3) Limits for each control Measure	Monitoring				(8) Corrective Actions(s)	(9) Verification	(10) Records
			(4) What	(5) How	(6) Frequency	(7) Who			

Firm Name:	Species of Fish:
Firm Address:	Method of Storage and Distribution:
Signature:	Intended Use and Consumer:
Date:	

Appendix 2. ANS-HACCP Plan –Phase III Walleye for Rathbun Fish Hatchery.

1) Product Description

Firm Name:	Rathbun Fish Hatchery
Firm Address:	15053 Hatchery PL Moravia IA 52571
Species of fish:	8 – 10” walleye grown in circulating ponds.
Cultured or wild harvested:	Cultured
Harvest method:	Seined from circulating ponds
Method of distribution and storage:	Loaded into tub with dipnet then craned up to fish distribution truck
Intended use and consumer:	To be stocked in lakes across the state of Iowa for grow and take fishery

2) Potential Hazards	
1)	ANS Fish and Other Vertebrates.
	Yellow bass, gizzard shad
2)	ANS Invertebrates.
	None known.
3)	ANS Plants.
	None known

3) Flow Diagram					
(1) Harvest or Aquaculture Step	(2) Identify potential ANS hazards introduced or controlled at this step (1)	(3) Are any potential ANS hazards significant? (Yes/No)	(4) Justify your decisions for column 3.	(5) What control measures can be applied to prevent the significant hazards?	(6) Is this step a critical control point? (Yes/No)
Harvest walleye from ponds	Any species other than walleye	YES	Past observation at fish harvest.	Filtering of supply water and filling truck with filtered water	YES
Loading walleye onto truck	Any species other than walleye	YES		Visually inspect dip nets of fish via sort table device.	YES

Unload walleye into lakes		NO	Prior control measures. No water added during transport	None required	NO

Firm Name: Rathbun Fish Hatchery	Species of Fish: Walleye
Firm Address: Moravia, IA 52571	Cultured, wild harvested, or both: Cultured
Signature:	Intended Use and Consumer: Stocking into Iowa lakes/ponds. Anglers of Iowa.
Date:	

4) ANS-HACCP Plan Form

(1) Critical Control Point (CCP)	(2) Significant Hazard(s)	(3) Limits for each control Measure	Monitoring				(8) Corrective Actions(s)	(9) Verification	(10) Records
			(4) What	(5) How	(6) Frequency	(7) Who			

Firm Name:	Species of Fish:
Firm Address:	Method of Storage and Distribution:
Signature:	Intended Use and Consumer:
Date:	