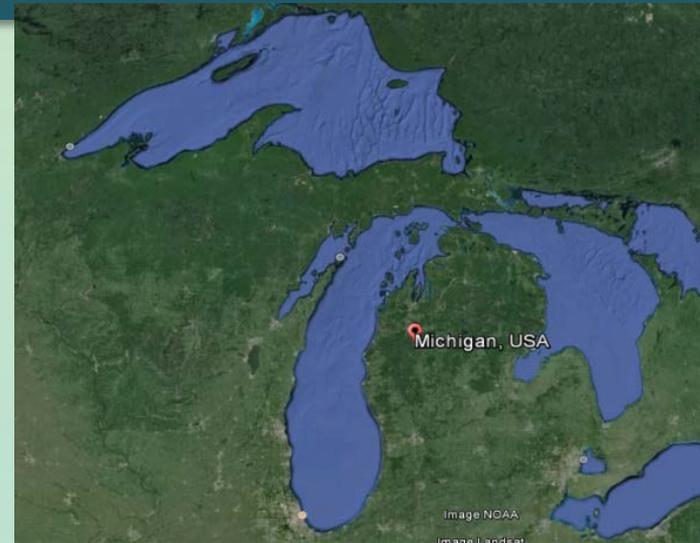


# Considering the Legal, Social, Economic, and Environmental Issues Regarding Proposals for Commercial Aquaculture Netpens in the Great Lakes



November 2, 2015



# QOL Commercial Aquaculture Workgroup

- **DEQ – Executive Division, Office of the Great Lakes, Water Resources Division**
- **DARD – Executive Division, Economic Development Division, Animal Industry Division, Environmental Stewardship Division**
- **DNR – Executive Division and Fisheries Division**



# Is net-pen aquaculture a suitable activity for Michigan's waters of the Great Lakes?

- 1. Proposals presented to Michigan QOL agencies*
- 2. Status of aquaculture in Michigan*
- 3. Process of evaluation and resulting information*
- 4. Public engagement process*



# Types of Aquaculture

1. Recirculating Aquaculture Systems (RAS)
2. Flow-through Systems
3. Pond Aquaculture
4. Net Pen (Cage) Aquaculture



# Commercial Aquaculture Industry in Michigan

- Michigan has 43 active registered aquaculture facilities -- 24 are ponds; 14 are flow-through; 5 recirculating aquaculture systems.
- *“A Strategic Plan for a Thriving & Sustainable Michigan Aquaculture”* – MI Sea Grant and Origins



# Open Water Net-Pen Culture in Ontario

- Six licensed net pen operations in Ontario: one in Parry Sound and five in the North Channel off the Manitoulin Island.
- Relatively low manpower except for feeding and harvest
- Reliant on land-based farms to supply fingerlings



# Proposals Presented to QOL Agencies

## Coldwater Fisheries, Inc.

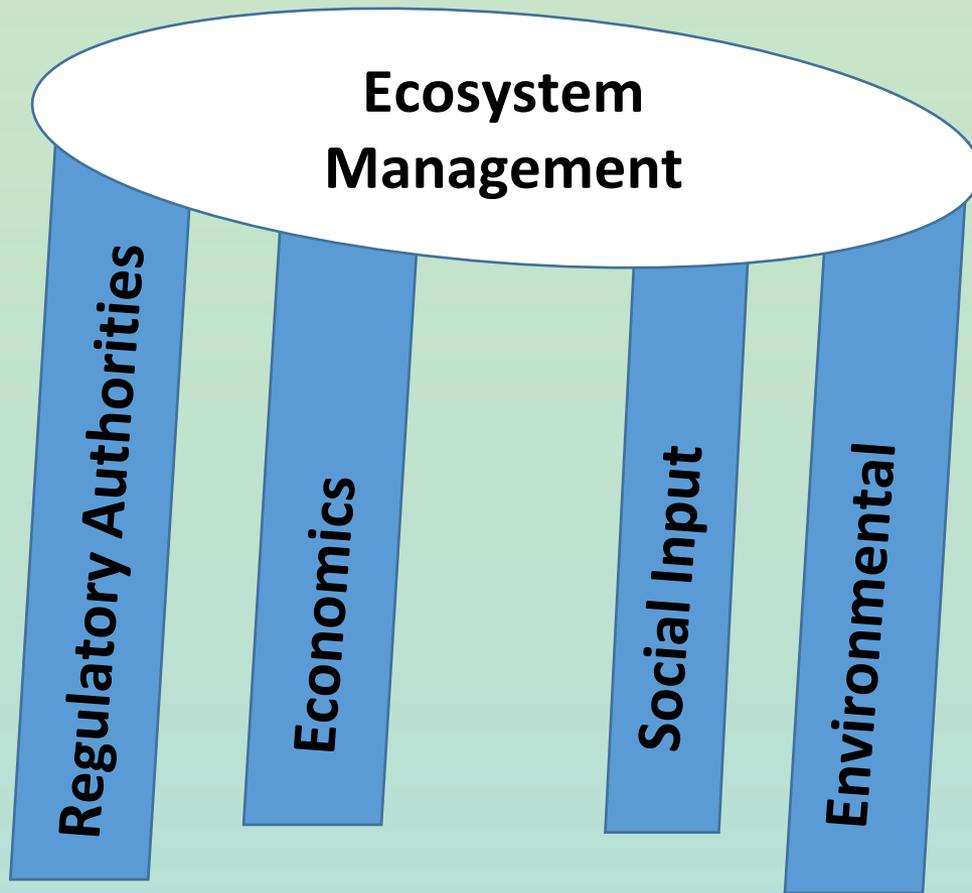
- Currently in Ontario waters of Lake Huron
- Proposing two sites in Bays de Noc
- Targeting 385,000 lbs of RBT

## Project Rainbow

- Aquaculture Research Corp.
- Three possible sites in NLH
- Targeting 500,000 lbs of RBT



# Framework for Analysis



# Regulatory Authorities

## State and Federal Permits & Licenses

Constuction Permit  
DEQ and ACOE

Bottomlands  
Conveyence  
DEQ

NPDES Permit  
DEQ

Fish Stocking Permit  
DNR

2000 Consent  
Decree  
DNR, USFWS, 5  
Tribal Nations

Registration of  
Aquaculture  
Facility  
MDARD

## Bi-National Agreements

Great Lakes  
Water Quality  
Agreement

Great Lakes  
Commission

Great Lakes  
Fishery  
Commission



# Based on current law, commercial netpens cannot legally operate in the Great Lakes.

- The Aquaculture Development Act of 1996 (PA 199) states that aquaculture facilities may only be registered by MDARD if they are operating in **privately controlled waters**.
- The Great Lakes are not privately controlled waters.
- Therefore, current state law does not allow the state to register a commercial net-pen aquaculture facility in the Great Lakes.



# Economic Analyses

*Does the market demand exist to warrant industry expansion?*

1. Small Business Development Corporation – *broad overview of aquaculture industry globally*
2. MSU Dr. Steve Miller, et al. – *economic models developed for site specific examples*
3. MSU Dr. Frank Lupi – *balance of natural resource assets with critique of economic model*



# The Business Case

- The US imports about 75 percent of the seafood it consumes.
- Growth constraints include feed costs, processing capacity, financing and experienced labor.
- Locating two one million pound facilities in Michigan would lead to up to 17 direct jobs, generating annual personal income of \$1.2 million.
- This volume of production would likely contribute \$4.3 million in annual gross domestic product, provided fish processing is done in Michigan.
- Recreational fishing in the Great Lakes is about \$1 billion per year plus other tourism values.

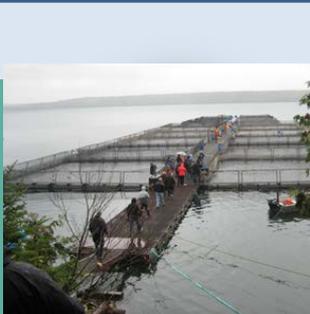


# Environmental/Ecological Review

## Key Issues or Areas of Uncertainty

1. Environmental and ecosystem effects
2. Fish health and disease concerns
3. Effects of fish escapes on wild populations
4. Human health concerns
5. Siting considerations
6. Gaps in existing body of scientific literature





October 19, 2015

# Great Lakes Net-Pen Commercial Aquaculture: A Short Summary of the Science

*Submitted to the departments of Agriculture and Rural Development,  
Environmental Quality and Natural Resources*

Eric J. Anderson, NOAA, Great Lakes Environmental Research Laboratory

John M. Dettmers, Great Lakes Fishery Commission

James S. Diana, University of Michigan, Sea Grant

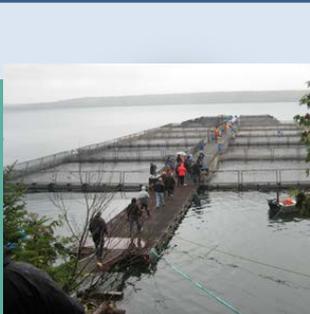
Keith McCormack, Hubbell, Roth & Clark

James A. Morris, NOAA, National Ocean Service

David Scarfe, Aquatic Veterinary Associates LLC, USDA-APHIS-VS

Craig Stow, NOAA, Great Lakes Environmental Research Laboratory

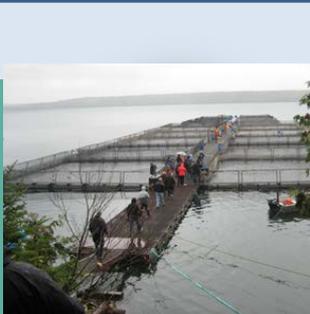
Roy A. Stein, Chair, The Ohio State University



# Science and Net Pen Aquaculture in the Great Lakes

## The Panel Process

- Two meetings
- Agency presentations
- Conference calls with agency and industry personnel
- Multiple panel conference calls
- e-mail correspondence among panelists
- Three drafts discussed by panel
- Consensus-generated report, independent from agencies



# Science and Net Pen Aquaculture in the Great Lakes

## Overarching Management Approach - Active Adaptive Management

- Learn by doing net-pen aquaculture
- Sample **B**efore, **A**fter, **C**ontrol, **I**mpact – BACI design
- Quantify net-pen effects, differentiate from ongoing changes in Great Lakes
- Goal to increase production and mediate environmental effects



# Science and Net Pen Aquaculture in the Great Lakes

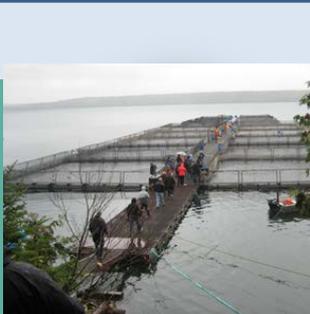


## Operations

- Use sterile/triploid, native or naturalized fishes
- Monitor net-pen and cage operations
- Provide bonds to cover decommissioning costs
- Respond to Great Lakes issues, such as ice, zebra mussels, invasive species, etc.

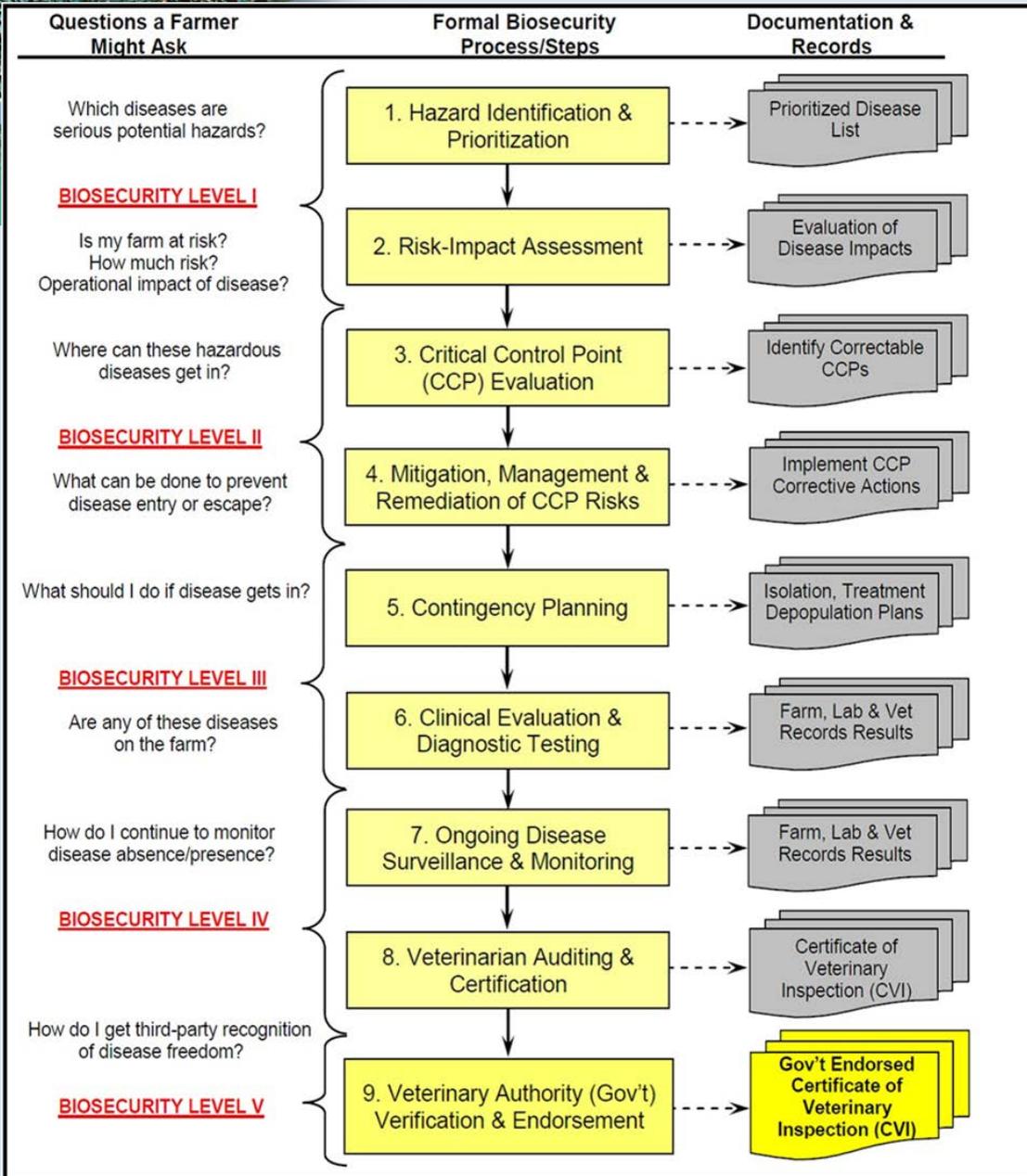


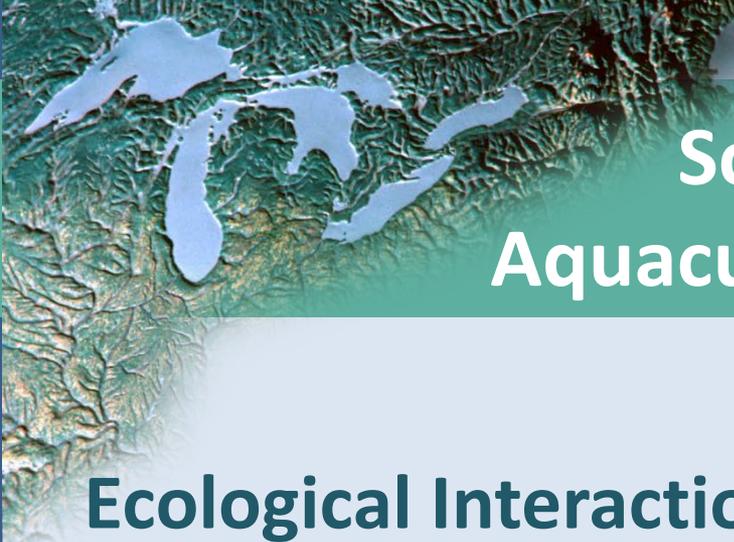
# Science and Net Pen Aquaculture in the Great Lakes



## Fish Disease and Human Health

- No concerns with fish health advisories
- Use disease-free fish
- Work to improve disease surveillance, monitoring, and reporting
- Use licensed and USDA-accredited veterinarians for disease treatments requiring antibiotics, etc.
- Adopt biosecurity plans - disease prevention highest priority





# Science and Net Pen Aquaculture in the Great Lakes



## Ecological Interactions

- Effluents
  - ✓ Capture/treat effluents – technologically infeasible
  - ✓ Minimize ecosystem impacts by siting appropriately
  - ✓ Use native or naturalized fishes
  - ✓ Follow rigorous principles in Waples (2012) to reduce genetic impacts



# Science and Net Pen Aquaculture in the Great Lakes

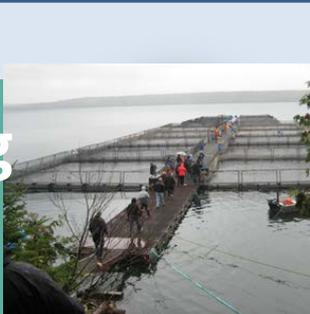


## Siting

- Recognize how much we know and don't know
- Use rigorous data-driven modeling to characterize important site-specific metrics such as flushing
- Develop siting tool, similar that developed for siting windpower in the Great Lakes (Lakebed Alteration Decision Support Tool)



# Relevant Data Sets for Assessing Siting Conditions in the Great Lakes



Data	Source	Link
Meteorological conditions	NOAA National Center for Environmental Information (NCEI)	<a href="https://www.ncei.noaa.gov/">https://www.ncei.noaa.gov/</a>
Oceanographic conditions	NOAA National Ocean Service (NOS)	<a href="http://tidesandcurrents.noaa.gov/">http://tidesandcurrents.noaa.gov/</a>
	NOAA Great Lakes Environmental Research Laboratory (GLERL)	<a href="http://www.glerl.noaa.gov/res/glcfs/">http://www.glerl.noaa.gov/res/glcfs/</a>
	Great Lakes Observing System (GLOS)	<a href="http://www.glos.us/">http://www.glos.us/</a>
Bathymetric data	NOAA National Center for Environmental Information (NCEI)	<a href="https://www.ncei.noaa.gov/">https://www.ncei.noaa.gov/</a>
	U.S. Army Corps of Engineers	<a href="http://www.usace.army.mil/">http://www.usace.army.mil/</a>
Lakebed Alteration Tool	University of Michigan	<a href="http://www.glgis.org/ladst/">http://www.glgis.org/ladst/</a>
Ecological Data	EPA	<a href="http://www.epa.gov/glnpo/">http://www.epa.gov/glnpo/</a>
General Information	NOAA/GLERL	<a href="http://www.glerl.noaa.gov">http://www.glerl.noaa.gov</a>



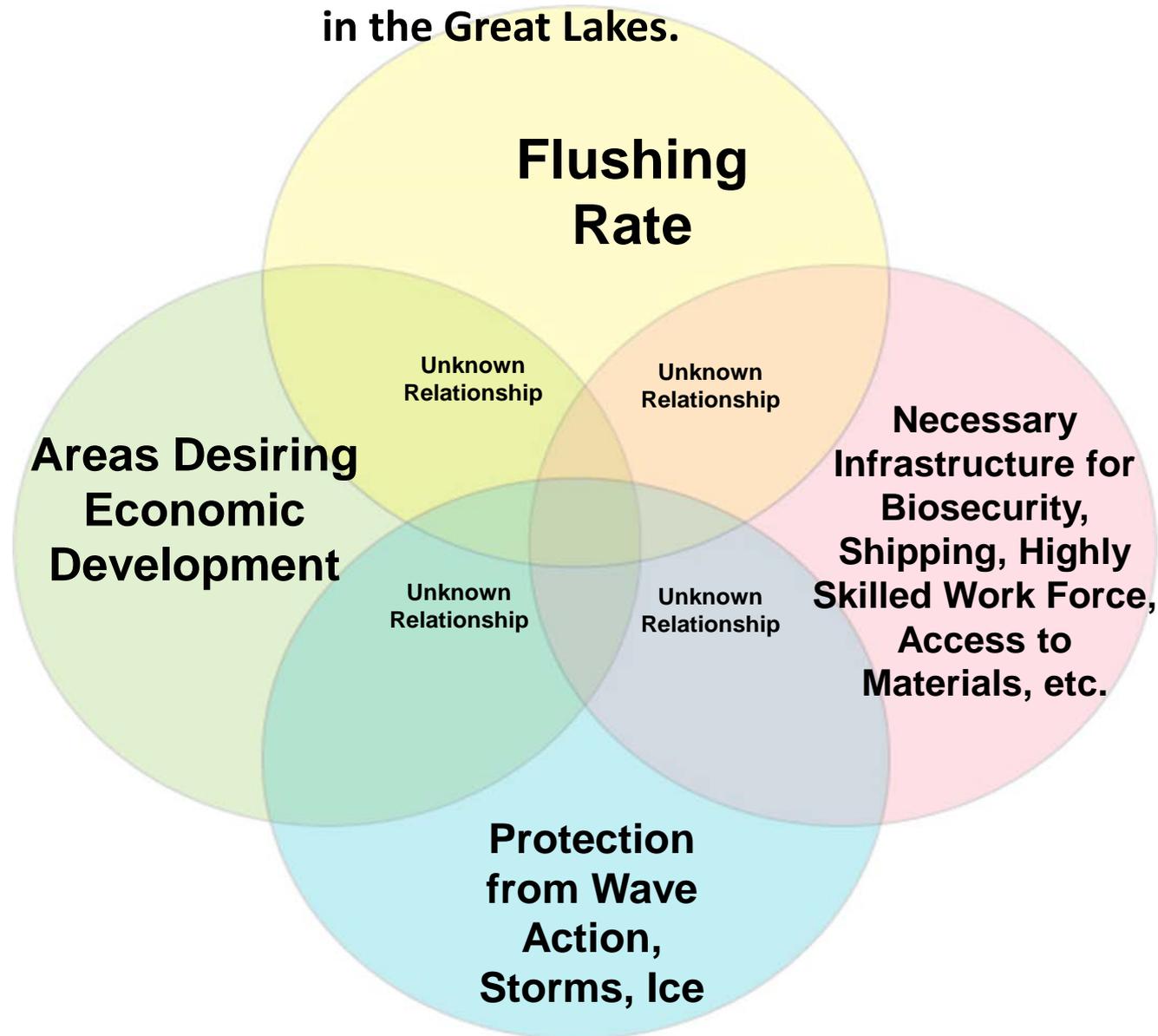
# Science and Net Pen Aquaculture in the Great Lakes



## Panel Reflections

- Consent Decree, Joint Strategic Plan, GLWQA 2012, LAMP
- The Precautionary Principle: Adopt, err on the side of caution because we don't have much experience
- Finite Phosphorus Loadings: QOL group limits P loading through regulation
- Critical siting considerations

**Critical Siting Considerations: The challenge of finding net-pen sites with low-impact (re ecosystem structure and function), high-yield (re fish production) in the Great Lakes.**



# Tribal Nation Input

- 9 of the 12 federally recognized tribes participated in meeting
- Concern for negatively affecting the fishery and water quality
- Nearly 1,700 written comments were received
- Desire to be a part of any future process



# Social Input/Public Engagement Process

- **Nearly 1,700 written comments were received**
- **Opposition (approximately 1,600 letters)**
  - Risks to water quality, the fishery (genetics, disease, escapes), and tourism
  - Some voice support for recirculating, closed, and flow-through aquaculture
- **Support (11 letters)**
  - provision of jobs, economic benefits to local economies, and provision of a desired product
- **Other Considerations for shared management of Great Lakes**



# Thank You

<http://www.michigan.gov/aquaculture>



# **MICHIGAN DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT**

## **PESTICIDE & PLANT PEST MANAGEMENT DIVISION**



Division Update  
February 24, 2016



# Outline

- Review our core programs
- Review priority inspection activities
- Fee increase activity
  - Legislative changes
  - Implementation
- Other priority activities – Great things are happening!



# Our Core Programs

- Protecting the animal feed supply and its link to animal and human health.
- Conducting 3<sup>rd</sup>-party audits to verify the grade and quality of fruits and vegetables and ensure good agricultural and handling practices are being followed.
- Facilitating international and interstate trade.



# Our Core Programs

- Detecting and responding to exotic pests.
- Ensuring the availability and appropriate use of both restricted and general use pesticides.
- Ensuring bulk agrichemical storages facilities are constructed, installed, and maintained to protect health and the environment.



# Priority inspection activities

- Feed safety activities including, medicated feed and elevator sanitation inspections.
- Pesticide use inspection and investigation activities including, responding to suspected or alleged misuse of pesticides.
- Trade facilitation activities including export certification.



## Fee Increase Activity - Pesticides

- Increased the pesticide product registration fee from \$40 per product to \$100 per product.
- Eliminate the private applicator fee sunset.
- Added resident agent language.
- Added auditing language.



# Implementation

- Increase inspections, surveillance and timely follow-up.
  - Schools, day care centers, and public buildings to prevent misuse and harm to health
  - Marketplace surveillance of products to prevent unregistered, unapproved and unsafe pesticides from being sold.
  - Pesticide misuse complaint follow-up and timely closure of investigations.
- New staff resources
- Lab analysis support



# Implementation

- Modernize the process for certifying applicators.
  - Computer based testing
  - Exam scheduling changes
  - Review laws and regulations
  - On-line exam preparation tools
  - Modernize the recertification by seminar attendance program



## Fee Increase Activity - Fertilizer

- Increased fertilizer inspection fees from \$.10 per ton to \$0.35 per ton for all products.
- Added resident agent language.
- Fertilizer research fund established.
- Fertilizer Advisory Committee created.
- Added auditing language



# Implementation

- Bulk storage
  - 30% growth in commercial bulk storage
  - Consultation, education and inspection.
- Increased auditing of firms, both in-state and out-of-state.
  - Michigan Department of Treasury



# Fee Increase Activity - Feed

- Increase the feed tonnage fee from \$0.13 per ton to \$.30 per ton.
  - By-products with a moisture rate above 60% would have a new rate of \$.15 per ton.
- Increase the feed licensing fee from \$25 to \$100.
- Added resident agent language.
- Added auditing language.



# Implementation

- Replace federal grant funding that ended in 2015.
- Focus on feed safety inspections including medicated feed inspections and elevator sanitation inspections.
- Increased auditing of firms, both in-state and out-of-state.
  - Michigan Department of Treasury
- New staff resources.
- Lab analysis support.



# Other Priority activities

- Operation Excellence
- Accela
  - Phase One – Nursery
  - Phase Two - All other PPPM programs
- Succession Planning!

**Thank you.**



PPPM Mission Statement –  
*To protect human health and the  
environment while fostering a diverse,  
viable Michigan Agriculture*

PLACE  
STAMP  
HERE

Michigan Beef Industry Commission  
2145 University Park, Ste 300  
Okemos, MI 48864

## The Beef Checkoff In Michigan

Producer investment in the Beef Checkoff has not changed in Michigan since 1986 when the Michigan Beef Industry Commission stopped collecting Michigan's state assessment and began collecting the \$1/head national Beef Checkoff. Over time, the number of cattle being assessed has decreased substantially and the inflation-adjusted purchasing power of the \$1.00 Beef Checkoff has been reduced to just .42 cents.

The beef industry is facing challenging competition in the marketplace, strong opposition from anti-meat groups, and declining revenue; forcing more opportunities to be left on the table than ever before.

### FARM COMMODITY CHECKOFF COMPARISON

COMMODITY	RATE	PRODUCER INVESTMENT ON \$1,600 IN SALES
National Dairy	\$0.15 for every 100 lbs	\$17.78 (based on \$13.50/cwt.)
National Soy	\$0.50 for every \$100 of value	\$8.00
National Pork	\$0.40 for every \$100 of value	\$6.40
Michigan Corn	\$0.01 per bushel	\$4.57 (based on \$3.50/bu.)
National Beef	\$1 per head	\$1.00
Michigan Beef	\$0.10 for every \$100 of value	\$1.60*

\* Represents maximum allowed by law. MBIC can decrease based upon conditions.

In 2015, Michigan cattle producers invested \$580,756 in the National Beef Checkoff at \$1 per head. By law, half must go to the Cattlemen's Beef Board to fund national programs, leaving MBIC with \$290,370 for state programs.

## Quotes from Cattle Producers

### 30 Years of the Beef Checkoff

"The beef industry has faced challenges like Mad Cow Disease, misinformation from activist groups, and claims that red meat causes cancer. The beef checkoff has protected and defended the industry time and again, but it takes money to get the facts out there. When you look at the \$1 per head that started 30 years ago, what else has stayed the same price during that time?"

- Tim Andrews, Sault Ste. Marie

### Building Beef Demand

"The beef industry needs to focus on keeping beef on the menu and keeping beef relevant to our consumers. This is done by promotion, consumer information and research. We can't predict the biggest problem that will confront our industry over the next ten years, but with the right resources we can be ready to tackle it when it happens."

- Dale Oeschger, Bay Port

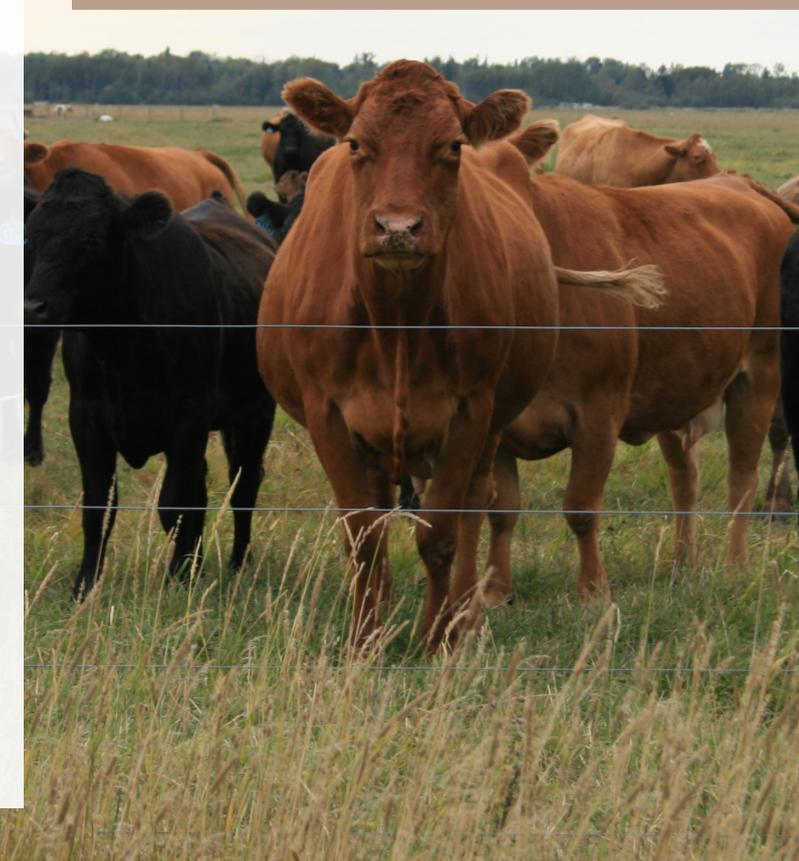
### Practical Solutions

"As dairy producers, we are also beef producers. The national beef checkoff has done a great job, but we feel there is an opportunity to enhance producer input into research that will solve problems we face on the farm. We need practical solutions that make economic sense. The state program will allow producers to guide research that will benefit the beef and dairy industries in Michigan."

- Dan Javor, Hastings



# THE BEEF CHECKOFF AND MICHIGAN'S ASSESSMENT



2145 University Park, Ste 300  
Okemos, MI 48864  
517.347.0911 | www.MIBeef.org

## Why Reinstate the Program?

- Greater resources are desperately needed to continue building demand for beef.
- Resources would stay in Michigan and would be entirely controlled by Michigan producers.
- The state program would allow MBIC to explore additional marketing opportunities for Michigan beef.
- The state program can help research and address challenges facing Michigan producers.
- The state program would provide resources to address pressing industry issues that may not have surfaced yet.

## Purposes and Objectives

- Promote the sale and use of beef and beef products in Michigan.
- Support the beef promotion, research, education, consumer marketing and other activities of the national beef checkoff.
- Conducting scientific research on any or all phases of beef production, marketing or promotion.
- Dissemination of reliable information on the purchase, pricing, identification, care, cookery, serving, nutrition, and economic value of beef and beef products.

## MBIC In Action

### New Products

MBIC introduces new beef products by demonstrating recipes and distributing samples. Beef value cuts have added \$50-70 per head to the beef cutout.

### Tours

MBIC holds tours for chefs, dietitians and bloggers to share the facts about beef production in Michigan.

### Education

MBIC teaches modern beef cutting methods that result in more convenient, consumer-friendly cuts.

### Nutrition

MBIC works with Registered Dietitians to promote the nutritional value of beef in a healthy diet.

## Opportunities Left Behind

**Young Parents** – 74% of young parents prefer to serve their children chicken due to misperceptions about beef.

**Advertising** – Currently, MBIC focuses only on limited social media strategies.

**Issues Management** – Resources for challenging misinformation about beef are declining.

**Research** – Research provides the foundation needed to improve and defend your industry.

## Supporting Organizations

Dairy Farmers of America  
Michigan Cattlemen's Association  
Michigan Farm Bureau  
Michigan Milk Producers Association

## MI Assessment Task Force

Cattle producers representing Michigan's cow-calf, dairy and feeding segments met to determine the best way to enhance MBIC resources.

## Task Force Recommendation

The task force recommends MBIC reinstate assessments under the Michigan Beef Industry Commission Act, PA 291 from the sale of all cattle sold for slaughter or sold to be fed for slaughter.

MBIC should collect the state assessment concurrent with the \$1 per head national beef checkoff.

## Who Handles the Money?

The program would be administered by the existing Michigan Beef Industry Commission. MBIC is composed of 9 voting members appointed by the governor. Voting members include 3 Cattle Feeders, 2 Cow/Calf Producers, 1 Dairy Producer, 1 Packer, 1 Market Representative, and 1 Retailer.

**MBIC Voting Members:** Dale Oeschger, Jill Sears, Bret Schapman, John Haindl, Garry Wiley, Leonard Brown, John VanderBoon, Scott Acker, Hal Nieman

# MBIC WANTS YOUR INPUT!

## NAME:

(optional): \_\_\_\_\_

I am a:

Cow/Calf Producer  Backgrounder

Dairy Producer  Cattle Feeder

Annual Number of Cattle Marketed:

\_\_\_\_\_

I **SUPPORT** the MBIC reinstating Michigan's assessment at \$0.10 for every \$100 of value sold.

I **OPPOSE** the MBIC reinstating Michigan's assessment.

I **SUPPORT** the MBIC reinstating Michigan's assessment, but I have the following questions or comments:

Questions/Comments:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If you would like a response to your question, please provide your phone number below.

\_\_\_\_\_

To take this survey online, please visit  
[www.MIBeef.org](http://www.MIBeef.org)



**MBIG** MICHIGAN  
BEEF  
INDUSTRY  
COMMISSION

George Quackenbush  
Executive Director



IT'S WHAT'S FOR DINNER.\*





MBIC was established in 1972 through Public Act 291 and is composed of 9 voting Commissioners appointed by the Governor.

Assessment: 0.1% of gross

**Nine Voting Members:**

- 2 Cow-calf producers
- 3 Cattle Feeders
- 1 Dairy Producer
- 1 Livestock Marketer
- 1 Packer Representative
- 1 Retail Representative

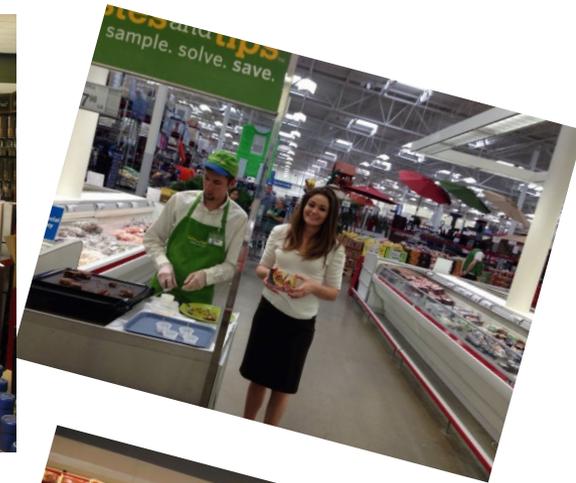
The purpose of the Michigan Beef Industry Commission is to **build the demand** for beef and veal products in order to **increase the opportunities** for all segments of the beef industry.

# \$1-per-Head National Checkoff

-  Promotion
-  Research
-  Consumer Information
-  Industry Information
-  Foreign Marketing
-  Producer Communications



# Michigan Retail Promotions



# Kroger Launches Flat Iron

- National Rollout of the Flat Iron Steak
- In-store demonstrations across Michigan.



# Michigan Consumer Outreach



**MSMS**  
MICHIGAN STATE MEDICAL SOCIETY

About MSMS | Membership | Education | Advocacy | Resources | History

### ASM 2015 ANNUAL SCIENTIFIC MEETING

The MSMS Foundation's Annual Scientific Meeting  
Register today >>>

OCTOBER 20-24, 2015  
SOMERSET INN, TROY, MI  
www.msms.org/ASM

**Latest News**

- MSMS Board Discusses Blues, Preparedness, & AHA on Midsummer Meeting
- Avoid OSHA Violations in Your Medical Office
- Employing Advanced Practice Providers: Balancing Benefits and Potential Malpractice Risks
- Current Medicare Incentive Programs to be Replaced by New Quality Initiatives - Physicians Must Act Now to Sustain and Grow Fee Schedule

Rosal Marie Henry, MD

**On-Demand Webinars**

View Webinar Listings >>>

**Become a Member**

MSMS is the voice of more than 10,000 physicians in Michigan, giving them the resources, education, and advocacy they need to remain leaders of the health care team and advocates for their patients.

Learn More | Join MSMS

**Upcoming Events**

- 7/8/2015 ICD-10: Know What You Need in Order to Code
- 8/12/2015 Opioids and Michigan Workers' Compensation
- 10/21/2015 16th Annual Scientific Meeting
- 10/21/2015 EE-LA Opioid XEMS: Achieving Safe Use While Improving Patient Care

Maria Daniels, MD

**Protein Challenge**

TAKE CONTROL

# Live a Flavorful Life

<https://www.youtube.com/watch?v=P1n9rHZnDnk>



# 2016 MBIC Budget

## REVENUES

Net Assessments	295,000
Interest	700
<u>Monies from Savings</u>	<u>34,500</u>
<b>Total Revenue</b>	<b>330,200</b>

## EXPENSES

Promotion	66,287
Consumer Info	68,212
Industry Info	41,192
Producer Comm.	41,740
Collection & Compliance	24,390
Administration	52,379
<u>Federation Investment</u>	<u>36,000</u>
<b>Total Expenses</b>	<b>330,200</b>

# Buying Power of the Dollar Through the Years



Item	Average Cost in 1986	Average Cost 2015
Pound of ground beef	\$1.29	\$5.15
Movie ticket	\$3.71	\$8.08
Average rent	\$385	\$1,150
Base cost of a half-ton pick-up truck ( <i>before options</i> )	\$10,677	\$34,795
Average home price	\$89,430	\$313,200
<b>Beef checkoff assessment</b>	<b>\$1 per head</b>	<b>\$1 per head</b>

- **\$1 now has the buying power of \$0.42**

# Task Force Recommendation

## **MI Assessment Task Force**

Cattle producers representing Michigan's cow-calf, dairy and feeding segments met to determine the best way to enhance MBIC resources.

## **Task Force Recommendation**

The task force recommends MBIC reinstate assessments under the Michigan Beef Industry Commission Act, PA 291 from the sale of all cattle sold for slaughter or sold to be fed for slaughter.

MBIC should collect the state assessment concurrent with the \$1 per head national beef checkoff.

**Supported by:** MCA, MIMPA, DFA, MI Farm Bureau

## **MBIC Voting Members:**

Dale Oeschger

Jill Sears

Bret Schapman

Jon Haindl

Garry Wiley

Leonard Brown

John VanderBoon

Scott Acker

Hal Neiman

# Purposes and Objectives

- Promote the sale and use of beef
- Support promotion, research, education, consumer marketing and other beef checkoff activities.
- Scientific Research on any and all phases of beef production, marketing or promotion.
- Dissemination of reliable information about beef.

# Your Opinion IS Important

MBIC is Seeking Producer input through an outreach and survey campaign.

MBIC will examine survey results in April.

If producers support the recommendation, assessments could begin October 1, 2016.

## FARM COMMODITY CHECKOFF COMPARISON

COMMODITY	RATE	PRODUCER INVESTMENT ON \$1,600 IN SALES
National Dairy	\$0.15 for every 100 lbs	\$17.78 (based on \$13.50/cwt.)
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National Beef	\$1 per head	\$1.00
Michigan Beef	\$0.10 for every \$100 of value	\$1.60*

*\* Represents maximum allowed by law. MBIC can decrease based upon conditions.*

# Input Sought at Public Hearings, Producer Meetings, Industry Events

- January 19 – Cattle Feeder Shortcourse, E. Lansing
- January 21 – Cattle Feeder Shortcourse, Bad Axe
- January 27 - MSU Extension Regional Beef Meeting, Paris
- February 2 – MSU Extension Regional Beef Meeting, Escanaba
- February 3 - Thumb Cattlemen Meeting, Bad Axe
- February 3 – MSU Extension Regional Beef Meeting, Rudyard
- February 4 – MSU Extension Regional Beef Meeting, Ontonagon
- February 13 - MCA Annual Conference, E. Lansing
- February 17 - MSU Extension Regional Beef Meeting, Ionia
- February 24 – Michigan Agriculture Commission, E. Lansing
- March 10 – Great Lakes Forage and Grazing Conference, E. Lansing
- March 11 – MDARD Public Hearing, Doherty Hotel, Clare, MI
- March 15 – MDARD Public Hearing, Hampton Inn, Marshall, MI
- March 17 – MSU Extension Dairy Advisory Meeting, St. Johns
- March 17 – MSU Extension Regional Beef Meeting, MMCC, Clare
- March 23 – Michigan Milk Producers Delegate Meeting, Lansing
- April 1-2 – Michigan Beef Expo, E. Lansing

# MBIC WANTS YOUR INPUT!



**PLEASE!!**

**Complete & Return the  
Producer Survey**

**Survey also available at  
[www.MIBEEF.org](http://www.MIBEEF.org)**