

2015 NCRAC ANNUAL PROGRESS REPORT

Project Title: Regional Aquaculture Extension Specialist (RAES) [Progress Report]

Key Word: Extension

Total Funds Committed: \$205,165

Initial Project Schedule: September 1, 2013 to August 31, 2015

Current Project Year: September 1, 2014 to August 31, 2015

Participant(s): Christopher Weeks, Michigan State University, Michigan

Extension Liaison: K. Quagrainnie, Purdue University, Indiana

Industry Liaison: William Lynch, Mill Creek Perch Farms, Marysville, Ohio

Project Objectives

1. Continue RAES support to the NCR aquaculture community through ongoing activities in areas of services, leadership, assessing and addressing industry needs, and information transfer
2. Develop and implement strategies to address and promote aquaculture sustainability in the NCR.
3. Develop and strengthen partnerships from within the NCR and outside the region among regulatory agencies, industry, academia, and other relevant entities to foster open, meaningful dialog on critical issues and build support for the NCR aquaculture industry.
4. Coordinate efforts for seeking non-NCRAC support for NCR aquaculture development.

Project Summary

Extension has been identified as a top priority by the NCRAC Industry Advisory Committee and the NCR aquaculture community. The Regional Aquaculture Extension Specialist (RAES) project was initiated in 2008 under an overarching goal of advancing commercial aquaculture in the region. RAES initial objectives were to provide leadership and enhance information transfer to the aquaculture industry in the North Central Region (NCR). The RAES project has been rated high in subsequent years by NCRAC members and has been re-funded for continuation twice under expanded objectives. This has been advantageous in that work plans have been able to build upon previous project activities and outcomes. Through the RAES project, regional coordination has helped improve liaison services, project coordination, strategic planning, program facilitation, partnership building, outreach, and information dissemination to the aquaculture community at a time when aquaculture extension FTE's in individual states have been dropping. Currently there are less than 5 FTE's in aquaculture extension in the NCR; however, 1-2 more are expected in the near future. On July 1, 2014, PI Weeks moved from a full time appointment as RAES, to a shared 50% appointment; remaining appointment is with Michigan State University Extension.

Anticipated Benefits

- Information transfer to the aquaculture community via list serve, websites, and state association events and other direct contact methods.
- Continued updates on the NCRAC regulation website.
- An industry voice on state, regional and national regulatory issues such as AIS.
- A better understanding on ability to develop the current AIS HACCP program into

- a recognized certification or verification program.
- Strengthened partnerships for NCR aquaculture development.
- Submission of at least one grant proposal for NCR industry support in 2014-2015.

Project Progress

Activities in areas of liaison services, leadership, assessing and addressing industry needs, and information transfer are noted in the following activities.

Objective 1. — Full update to the NCRAC Regulation website “State Importation and Transportation Requirements for Cultured Aquatic Animals”. The PI served on planning steering committees for the 2014 NCR Aquaculture Conference in Toledo, OH, and 2015 Michigan Seafood Summit in East Lansing, MI. Between 9/1/13 and 8/31/15 the PI provided 11 presentations for stakeholders, public agencies, association meetings and conferences including key note addresses in OH and IA. The PI supported speakers to present at the NCR Aquaculture Conference. Current and/or important information was disseminated to stakeholders by the RAES via phone, emails, NCR fish culture list serve and eXtension Ask-an-Expert. Liaison activities included industry representation at public meetings likely to impact aquaculture and baitfish industry sectors (e.g., Great Lakes Panel for ANS), identifying contacts for industry consultation, and leading case by case discussions on regulatory issues for NCR producers. PI took lead role in the 2014 NCR aquaculture needs survey. This survey examined impediments impacting NCR aquaculture and where priorities should be placed for improvement.

Objective 2. — PI voiced industry concerns and interests to the Policy Committee of the Great Lakes Panel for ANS at bi-annual meetings. PI and R. Kinnunen conducted two AIS HACCP workshops for MI DNR and MI Bait Dealers Association. Weeks, Kinnunen (MI Sea Grant) and Phelps (UMN) were awarded \$80,000 grant through state of Michigan to explore expanding the current AIS HACCP program into a recognized verification/certification program (ongoing). Case studies are planned for states of MI and MN in 2016. PI collaborated with Ron Johnson, Nathan Stone (National ANS Task Force), and Mike Freeze (NAA President) on current national ANS issues. Pertinent and topical information was disseminated to aquaculture industry, supporters, and other subscribers to the NCR list serve.

Objective 3. — The RAES represented industry interests at various private and public forums and has standing appointments to the Committee for the Right to Farm Generally Accepted Agriculture and Management Practices, Michigan Commission of Agriculture; Great Lakes Panel on Aquatic Nuisance Species; Aquaculture in Michigan (AIM), NSF International Global Food Division Advisory Council. In 2014 the RAES was voted into the NCRAC Board as an ex-officio member, working closely with NCRAC Director and others on issues such as improving NCRAC’s project selection protocols and updating the NCRAC Strategic Plan. The RAES also helped to build and strengthen partnerships with a number of other organizations including, Indiana and Michigan Soybean Associations, Soy Aquaculture Alliance, Coalition for U.S. Seafood Production, National Institute for Sustainable

Aquaculture, initiative for Ohio Seafood co-op, and private agricultural business startup groups such as Originz. In addition, the RAES continued working with nonprofit groups including Aquaculture Research Corporation on Great Lakes open water aquaculture issues, and the Nature Conservancy on aquatic invasive species issues.

Objective 4. — From 9/1/13 to 10/31/15 the RAES established teams of regional researchers and extension personnel and submitted two proposals as PI to non-NCRAC funding sources. Two additional proposals were submitted to outside granting agencies with Weeks as co-PI.

Target Audiences

The RAES ultimately serves the aquaculture industry in the North Central Region. However, goals and objectives require working with stakeholders from across a wide background and include the general public, state, federal and tribal agencies, legislators, NGOs, industry and social development groups, and environmental protection groups.

Outreach Overview

In 2014 the NCRAC Regulation website received 4,689 page views. Through great combined effort, the 2014 North Central Aquaculture Conference was considered a great success with over 170 in attendance, providing an average overall evaluation score of 3.3 out of 4.0. Presentations received an average score of 3.6. There were 125 individuals in attendance at the 2015 Michigan Seafood Summit. Thirty individuals were trained in AIS HACCP, and two courses presented received good to excellent reviews. Project PI provided over 200 information posts per year by PI to the NCR Fish Culture List serve containing 140 members. These posts included relays of posts from other information outlets such as AquaContacts, and contained pertinent and important information such as summaries of Federal Register postings for new laws, economic and market issues, topical news, etc. Direct and personal communications for the RAES are estimated at over 500 individuals per year. Project PI facilitated discussion for producers in Ohio and Wisconsin with state of Michigan regulatory agencies leading to improved working environments for those producers. North Central Region Aquaculture Needs Survey results were disseminated to NCRAC members and used for 2014 and 2015 program planning activities. In 2014, a Strategic Plan for a Thriving & Sustainable Michigan Aquaculture was completed and adopted by the Michigan Aquaculture Association. The final report is available online on the Michigan Sea Grant Website.

Deliverables (Outputs)

Over the continuation period from 2013 the RAES provided the following deliverables:

Objective 1:

- Full update to NCRAC regulation website.
- Support in planning and facilitation of the 2014 NCR Aquaculture Conference in Toledo, OH, and 2015 Michigan Seafood Summit in East Lansing, Michigan.
- Attendance at over 20 meetings/conferences
- Provided 11 presentations for stakeholders, public agencies, association meetings and

conferences including key note addresses in Ohio and Iowa.

Administered and obtained results from the 2014 NCR Aquaculture Survey which were used in NCRAC strategic planning activities.

- Support resulting in update to Objective 1 of the NCRAC Strategic Plan • Development of the Michigan Aquaculture Strategic Plan.
- GIS model results examining temperature current and depth for potential siting of netpen facilities in the great Lakes.

Objective 2:

- Two AIS HACCP workshops for MI DNR and MI Bait Dealers Association.
- Two meetings in Minnesota at MNDNR and Oswald Fisheries.

Objective 3:

- Updated Generally Accepted Agriculture and Management Practices (GAAMPS), for Michigan.
- Provided industry representation at biannual Great Lakes Panel for Aquatic Nuisance Species and annual meetings for the NSF International Global Food Division Advisory Council.
- Developed working relationships with: - Kent State University, Tuscarawas Campus, to explore Cooperative Opportunities in the Ohio Fish Farming Industry (ongoing) - Jackson College, Jackson, Michigan for planning development of an aquaculture curriculum (ongoing).
- NCR industry representation at the NIAA's National Roundtable for Sustainable Aquaculture (ongoing).

Objective 4:

Submitted grant applications over the project period were as follow: USDA AFRI; A Practical Approach to Rapid Aquaculture Development across Midwestern US Rural Communities; \$499,408; status – not funded. State of Michigan (through GLRI); Towards AIS Free Certification in Aquaculture and Baitfish Industries; \$79,985; status – awarded. NOAA Sea Grant Aquaculture Extension 2015: Assisting the State of Michigan and Michigan Industries in Developing and Permitting More Sustainable Aquaculture Systems; \$451,611; status – awarded. NSF ATE grant; Jackson College Aquaculture Project: Meeting the Nation's Growing Demand for Locally Sourced Seafood; \$200,000; status – submitted.

Outcomes/Impacts

Due to complexities associated with advancing finfish aquaculture in the US, direct measurable impacts from RAES activities are difficult to assess. In the state of Michigan, two new NPDES permits were issued bringing the total number to three. A number of indoor startup facilities have arisen across the region although economic viability of NCR indoor recirculating aquaculture systems (RAS) and aquaponics remains questionable. The recent closing of Bell Aquaculture is a prime example. In order to identify needs and priorities, the

RAES along with IAC Chair and NCRAC Director developed and administered the 2014 NCR Aquaculture Survey. Results have been disseminated to NCRAC members and have been used and referenced extensively for strategic planning activities (ongoing).

Impacts Summary

Relevance. — According to the USDA 2013 Census, aquaculture production in the NCR is down from 2005 while value has increased. Extension FTE's across the region have been dropping. Regulations continue to be the primary industry concern limiting expansion, and it appears the public has a strong perception that aquaculture expansion must be through RAS for a variety of reasons.

Response. — 2014 NCR Survey results indicate that regulations are considered the largest impediment to industry expansion. Annual updates to the NCRAC regulation website and RAES liaison activities have been noted as helpful. The RAES and others in the NCRAC community continue to try to identify economic related problems with profitability of indoor systems (ongoing).

Results. — The 2014 NCR aquaculture survey received a good response rate (37%), suggesting respondents thought aquaculture development in the NCR is important to them. Subsequent NCRAC planning activities have brought forward initiatives for changes in NCRAC program planning including priority selection protocols and identification of extension as a leading priority by the IAC. According to producers and interstate transporters confusion regarding the extensive array of regulations across states has been helped by RAES activities, and in some cases communications between producers and state agencies is apparent. Since the release of the Michigan Aquaculture Strategic Plan there has been a flurry of activity in Michigan regarding development of netpen aquaculture systems in the Great Lakes. Two proposals were subsequently submitted to the state for commercial rainbow trout production facilities. In response the state of Michigan commissioned reports on environmental and economic concerns and issues, and on regulatory framework regarding netpen aquaculture in Michigan. These reports are available for review at the Michigan Department of Agriculture Aquaculture website.

Recap. — With the exception of Bell Aquaculture, aquaculture production in the NCR appears to have come to a stable point and could be beginning to increase; however, much work is yet remains in the area of indoor system profitability and overcoming negative impacts from regulations.

Publications, Manuscripts, Workshops, and Conferences

See the Appendix for a cumulative output for all NCRAC-funded Extension activities.