

RAMBLINGS NASAC NEWSLETTER

PRESIDENT'S MESSAGE

SEPTEMBER 2011

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LYNNE CANTER, Editor
nasac@nasac.net

NASAC,

Congratulations to Kentucky and Ohio on receiving a \$49,000 Federal-State Marketing Improvement Program grant for aquaculture. The study they are partnering on will “investigate the feasibility of creating a profitable seafood marketing system using low to moderate investment that takes into account the demand for fresh/live seafood markets in Kentucky and Ohio, and the supply of aquaculture products from small-scale and seasonal growers.”

I'd encourage any state considering doing a FSMIP for the 2012 award cycle to consider one focusing on aquaculture and take advantage of the \$500 supplemental grant NASAC now offers. The details of this newest member benefit are in the last edition of the NASAC newsletter at <http://www.nasac.net/MayNewsletter2011.pdf>. The key items to remember are that the state needs to have their dues paid by December of this year, and the request sent to NASAC before January 2012.

While we are on the topic of marketing, I'd direct you to the summer edition of the Guy Harvey Magazine <http://guyharveymag.epubxp.com/title/10036>. It focused on US aquaculture, sustainable seafood, safe seafood, and buying domestic vs. foreign product. It seemed to do a good job sharing these aspects regarding both wild and farm-raised products without pitting one against the other.

Please read the article later in this newsletter about the USFWS announcement to list a number of species under the Endangered Species Act. Some states only have a couple species on the list while others have a lot. As a result, the impact to aquaculture will certainly vary by state. The Southeastern states all seemed to have a lot of species listed and would do well to take note.

On a related note, please let Ron Johnson Ron.Johnson@uwsp.edu know if you have any ANS items he needs to be aware of before he heads to the November 2-3 Aquatic Nuisance Species Task Force (ANSTF) meeting. If you don't have anything, it may be worth looking at the agenda http://anstaskforce.gov/meeting_11_2011.php to see if any of the items listed there are of concern to you. The more we can let Ron know what is going on in our states, the better he can represent us at the meeting. NASAC has participated in this group since it began in the early 1990's but along with other ex-officio members will now be voting on the items that are discussed.

As always, please let me know if there is anything with which NASAC can help you.

Bart

VICE PRESIDENT'S MESSAGE

Debra Sloan
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FROM THE MOUNTAINS OF WNC

It's been a long, hot dry summer in the mountains. For almost a decade we've been in a drought and the trout farmers are seeing 50% of the flow rate than they did ten years ago. Last year rivers and creeks were at unprecedented lows and the sweltering summer temperatures compounded the problem. This year followed the same pattern causing the farmers to produce fewer pounds and projected revenue streams fell short. The irony is that the market demand for trout far outpaces WNC production ability. It wasn't that way almost twenty years ago. Now the processors often have to outsource fish and the farmers are frustrated with the lingering weather. If this weather pattern would break ... But the weather has been unpredictable for everyone, hasn't it? Everybody has been challenged and all of agriculture is feeling the pinch.

On a brighter note, the public is embracing buying local or US products and this trend is stimulating community economies. The growing success of small scale farming is causing traditional agriculture to redefine its meaning. Folks are figuring out ways to farm more intensively and smarter. WNC leads the nation in local food's focus and folks are excited about the increasing interest in farming. Our trout processors are capitalizing on this new economy and enjoying the benefits of the new market. So what does that mean to aquaculture? Food fish and recreational sales remain strong even in the weak economy. That doesn't mean that the bottom line isn't smaller but all of us are feeling that pressure. The US aquaculture industry is tenacious ever since it was painted as the "Wave of the Future" back in the eighties. As we say in the south, if we pull together, by opening lines of communication, and recognizing there is strength in unity there will be a brighter future with more rewards.

In the last newsletter I asked folks what they wanted or needed from NASAC and no one responded – we're all busy, we're looking at our backyards because that's where it's personally important and necessary. But let's stand back for a moment and look at the larger picture. How do we or can we work together to everyone's mutual benefit? Or do we even need to? That's your call – again, what do you want or need from NASAC?

AQUACULTURE NEWS FROM AROUND THE STATES

T. Robins Buck
Virginia Department of Agriculture and Consumer Services
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Virginia Aquaculture Conference

The **Virginia Aquaculture Conference** will provide an opportunity to learn about current and upcoming issues, explore new developments in culture technology, and interact with others with similar interests.

VAC 2011

November 18-19, 2011
The Williamsburg Hospitality House
415 Richmond Rd.
Williamsburg, Virginia 23185

Gala Aquaculture Reception

Friday, November 18, 7:00 to 9:00 p.m.

Join us to taste the variety of Virginia cultured products. Sample hard clams, oysters, mountain trout, cobia, catfish, tilapia, hybrid striped bass, and freshwater prawns—all grown in Virginia! Attendance is included in your registration fee.

Stay Tuned for Conference Details

Agenda and speaker information is being developed. Contact Karen Hudson, Virginia Institute of Marine Science with any questions: khudson@vims.edu or [804-684-7742](tel:804-684-7742).

Oyster Aquaculture on Upswing in Virginia

by Janet Krenn | July 28, 2011

http://www.vims.edu/newsandevents/topstories/shellfish_aquaculture_report_2011.php

Virginia's oyster aquaculture industry is poised to begin its biggest growth spurt ever, according to a report from Virginia Institute of Marine Science and Virginia Sea Grant. In 2010, oyster growers sold over 16 million oysters worth more than \$5 million. Growers surveyed expect to sell nearly twice as many oysters in 2011. Following years could increase further, as growers planted three times more oyster seed in 2010 than ever before.

The expansion of the oyster industry in Virginia is mainly attributed to the increase of more intensive aquaculture practices that protect the grower's investment. For example, using oyster seed developed in the [hatchery at VIMS](#) has reduced the impact of disease while improving meat quality. At the same time, growers have been taking measures to reduce predation on oysters by growing oysters in protective cages and floats.

"Basically, these practices make it possible for growers to plant more oysters upfront and then have more oysters alive to harvest the next year, when the animals mature," says Karen Hudson, Shellfish Aquaculture Specialist at VIMS and co-author of the report. Whereas oysters continue to increase, hard clam sales and plantings have remained somewhat consistent, according to the report. Despite this, Virginia ranks number one in the country in clam production, with growers planting upwards of 370 million clams annually.

The "Virginia Shellfish Aquaculture Situation and Outlook Report" has been produced annually by Virginia Institute of Marine Science and Virginia Sea Grant since 2005. Results of this survey and other aquaculture topics will be further discussed during the [2011 Virginia Aquaculture Conference](#), Virginia's biannual meeting for finfish and shellfish aquaculturists, in Williamsburg November 18 and 19. [Find the "Virginia Shellfish Aquaculture Situation and Outlook Report" online.](#)

Paul Zajicek

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USFWS Reaches ESA Settlement Agreement

Every aspect of U.S. agriculture could be potentially impacted by a recent U.S. Fish and Wildlife Service (USFWS) announcement. On July 12th, the USFWS announced a settlement agreement, subject to court approval, to consider 250 species over the next 6 years for listing under the provisions of the Endangered Species Act. This link takes you to that announcement and related information (FAQs and the listing work plan):

https://us.vocuspr.com/Newsroom/Query.aspx?SiteName=fws&Entity=PRAsset&SF_PRAsset_PRAssetID_EQ=127722&XSL=PressRelease&Cache=True. The USFWS also offers a link to an Excel spreadsheet that lists the candidates by state:

http://www.fws.gov/endangered/improving_esa/Candidate%20List%20021011_STATES.xls. Species include insects, flowering plants, mammals, reptiles, fish, and molluscs.

One of the plaintiffs is the Center for Biological Diversity. They also announced the agreement but in slightly different terms. They have said that the USFWS will be considering 757 species from now through 2018. Their link is to a webpage that presents the species alphabetically, taxonomically and by state and is here:

http://www.biologicaldiversity.org/programs/biodiversity/species_agreement/index.html.

The difference in species numbers is related to an activity separate from the settlement agreement under which the USFWS has considered those species for potential listing and will be announcing their findings in the near future. Aquaculture coordinators should review these announcements and consider potential impacts on current and future aquaculture candidates.

Dan Swecker, Senator
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Press Release: Fraser River Sockeye Salmon Marine Survival Linked to Harmful Algal Blooms

The effects of harmful algal blooms (HABs) on farmed salmon in British Columbia (BC) have been documented to some degree but influences on wild salmon have not been examined until recently. A new study indicates probable strong linkage between naturally-occurring blooms of the fish-killing alga *Heterosigma akashiwo* in the southern Strait of Georgia, during the time period when juvenile sockeye pass through this area after exiting the Fraser River and poor returns of adult sockeye salmon two years later. This alga has historically been present in Washington State and British Columbia coastal waters, but over the past 20 years, the timing of blooms appears to be shifting earlier, now coinciding more frequently with the outmigration of juvenile salmon from their natal rivers through coastal seas. *Heterosigma* is a most versatile and allelopathic (i.e., harmful or inhibitive toward other biota) harmful algal bloom species and may injure or kill sockeye salmon through acute and chronic toxicity or food web impoverishment.

The recurring and persistent HABs seen in this area appear to be a major contributor to the low returns and decline of Fraser River sockeye since 1989, and in particular the disastrous return in 2009. This region, where the problem appears to originate, based on this and prior studies by harmful algal bloom scientists, has the most intense and prolonged *Heterosigma* blooms of all B.C. regions analyzed. The region has also been identified through other recent studies as a critical, if not the most important, marine area determining overall survival for Fraser River sockeye salmon.

Marine survival of Fraser River Chilko stock, the only stock with a long-term historical marine survival record, averaged 2.7% in years when juvenile sockeye salmon seawater migration in the Strait coincided with major *Heterosigma* blooms versus 10.9% in years when no or minor blooms occurred over the past 20 years. Since the mid 1990s, September young-of-the-year ("YOY") herring abundance in the Strait of Georgia was strongly correlated with the marine survival rate of Chilko stock Fraser River sockeye salmon and *Heterosigma* bloom timing in the Strait. Juvenile sockeye salmon and YOY herring co-occur for only six weeks in mid-May through June during initial salmon migration in the Strait. Sockeye salmon marine survival rates were therefore seen to be determined in that early period and this is the first strong evidence of this phenomenon.

Dr. Jack Rensel, lead author of the study and independent research contractor, noted that the *Heterosigma* also occurs in nearby Puget Sound, Washington State, where dead and distressed wild salmon and marine fish species have been observed in every major bloom since 1989. He also points out that the Chilko Lake stock that was part of the huge run of adult Fraser River sockeye in 2010 exhibited a survival rate substantially lower than the historical average and that the YOY herring to salmon survival relationship was maintained. Prior to 1995 no such relationship was seen.

The HAB and sockeye salmon relationship was not previously detected for many reasons including the fact that dead fish in relatively cool Pacific Northwest waters sink to the sea bottom beneath the even cooler thermocline where resurfacing is unlikely. Fraser River water volume discharge was quantitatively identified to be a bloom-controlling factor, with earlier and larger spring and early summer flows linked to major blooms in that period. The alga is known to prosper in areas of strong vertical stratification where it forms massive, unialgal blooms. Methods to detect and mitigate the blooms are available as discussed in the paper.

A combination of BC and Washington State harmful algae data was used in this study. BC data were provided by coauthor Nicky Haigh, a HAB expert in Nanaimo BC who operates the Harmful Algae Monitoring Program in collaboration with the BC salmon aquaculture industry. Other data was from the Canadian Dept. of Fisheries and Oceans publications and scientists at University of British Columbia. In Washington State, data was obtained from prior governmental, academic and privately funded studies conducted by Rensel and others. Sampling coordination and notification of bloom events is based on an internet notification system involving coastal managers, researchers and fish farmers with infrastructure provided by the U.S. National Office for HABs (Woods Hole Oceanographic Institution) as supported by NOAA, Center for Sponsored Coastal Ocean Research (CSCOR).

Contacts available for further information (for editors only please):

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See: Rensel, J.E., N. Haigh, T.J. Tynan. 2010. **Fraser River Sockeye Salmon Marine Survival Decline and Harmful Blooms of *Heterosigma akashiwo***. Harmful Algae 10:98-115. Available on line at: <http://www.sfu.ca/cs/science/resources/1288805500.pdf>

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John T. Salazar, Commissioner
James C. Miller, Deputy Commissioner



John Hickenlooper
Governor

The Four P's of a Safe and Sustainable Aquaculture Industry: Practices, Presentation, Promotion and the

The National Aquaculture Association (NAA) and the United Soybean Board have teamed up with the Colorado Department of Agriculture to sponsor an important oneday workshop. This six-hour workshop will be held on Friday, October 28th, 2011 at The Timbers Hotel in Denver, CO from 9:00am – 3:00pm. Registration will begin at 8:00am. The workshop will provide aquaculture producers with the knowledge and skills to more successfully market their products, grow their businesses, help shape the public's perception of aquaculture at a local level, and work with government decision-makers.

Workshop presentations include farm practices that demonstrate the absence of exotic diseases and invasive species, as well as regional perspectives of the environmental soundness and sustainability of aquaculture. Environmentally sound practices are increasingly important as both large institutional and small regional buyers actively search out eco-friendly growers and develop purchase specifications that include a sustainability component.

The workshop will provide aquaculture producers with the tools to help ensure that they can provide positive, upbeat, scientifically accurate information to help spread the good news about U.S. aquaculture. In addition to the actual workshop, each participant will receive a "toolbox" containing handy references and important information.

The workshop instructors include:

1. Dr. Andy Goodwin (University of Arkansas at Pine Bluff)
2. Dr. Nathan Stone (University of Arkansas at Pine Bluff)
3. Linda O'Dierno (NAA Outreach Coordinator)
4. Betsy Hart (NAA Executive Director)

For those interested in registering for the Four P's workshop, additional information is available on the Colorado Department of Agriculture Aquaculture Program website www.colorado.gov/ag/animals/aquaculture. Space is limited, so please register early!



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John T. Salazar, Commissioner
James C. Miller, Deputy Commissioner



John Hickenlooper
Governor

The National Aquaculture Association, the United Soybean Board, and the Colorado Department of Agriculture present:

**The Four P's of a Safe and Sustainable Aquaculture Industry:
Practices, Presentation, Promotion and the Press**

October 28, 2011 9:00am – 3:00pm

**The Timbers Hotel
4411 Peoria Street
Denver, CO 80239**

This workshop is prepared especially for fish and shellfish producers, buyers, educators and government regulators. There is no cost for this workshop (this location only) and lunch is included. Please see the Colorado Dept of Agriculture Aquaculture Program website for more details on the workshop. Space is limited, so please register early!

Registration due on or before September 10, 2011

Name: _____

Company: _____

Address: _____

City: _____ State: _____ Zip: _____

Main Phone: _____ Email: _____

I have special dietary needs _____

Please mail to: Colorado Dept of Agriculture/Animal Industry/Aquaculture Program
700 Kipling St., Ste. 4000
Lakewood, CO 80215
Or fax to: Scott Leach 303-239-4164

MISCELLANEOUS NEWS

Numeric Nutrient Criteria in Your Watershed – How Will You Cope?

International Plant Nutrition Institute, Plant Nutrition Today, Summer Issue, No. 6 (see <http://www.ipni.net/>)

The U.S. Environmental Protection Agency (EPA), which is responsible for protecting the designated uses of water resources and enforcing the Clean Water Act in the U.S., has stated that N and P pollution is a “widespread, significant, and growing problem”. The U.S. EPA expected states and tribes to adopt or revise ecoregional nutrient criteria for lakes and reservoirs, rivers and streams, and wetlands – that were published in 2000 and 2001 – into water quality standards by 2004.

As of December 2008 (the latest public EPA posting:

<http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/status.cfm>), half of the 50 states had not adopted numeric nutrient criteria into standards. In August 2009, a call to action was issued to EPA Administrator Lisa Jackson by the State-EPA Nutrient Innovations Task Group, stating the urgent need for a “common framework of responsibility and accountability for all point and nonpoint sources.” This urgent call added to the burdens of the states because they are ultimately responsible for completing and implementing N and P loss reduction plans to protect water resources. Some states have made good headway in defining and implementing nutrient criteria for their own water resource priorities and needs. However, in Florida, which was considered to be among one of the most proactive states in developing nutrient criteria, a consent decree to settle a 2008 lawsuit forced the U.S. EPA to step in and federally establish water quality standards for lakes and flowing waters, using causal (total N and total P) or response variables (chlorophyll a and clarity).

On top of federal and state budget deficit challenges, financial and professional resources are being strained as public servants and private contractors strive to scientifically develop numeric nutrient criteria and standards. Financial and professional resources are expected to be stressed even more as standards are enforced; especially for nonpoint source or diffuse nutrient pollution, which includes agriculture. The total annual regulatory compliance costs of such numeric nutrient criteria and standards regulation have been estimated to range from hundreds of millions of dollars to multi-billions per state, based on the current case in Florida. Unsurprisingly, some state and local water quality authorities and many agricultural stakeholders question the practicality and economic feasibility of trying to regulate nonpoint source (diffuse) N and P pollution. It has been commonly argued that it would be virtually impossible to monitor individual farm and field nutrient management and application activities, while others contend that random audits could be effective enforcement “sticks”.

Most experienced agronomists, conservationists, ecologists, and land managers recognize that it takes time to accomplish significant cropping system management and conservation changes in the landscape or watershed ... and it may take even longer for those changes to impact the quality of adjacent and downstream water resources. Because the large majority ... if not all ... of us in agriculture want to protect and preserve the integrity of our water resources, there have been increased discussions and proposals for the adoption of practice-based standards, as opposed to strict water quality or performance standards. These discussions are raising thoughtful questions, such as:

- Could increased agricultural stakeholder involvement in open discussions with state water quality authorities, and other interested parties, foster opportunities to address state-level policies that would intensify nutrient management and water quality education?
- Could state-level strategies and public policies endorse and expand implementation of science-based nutrient best management practices (BMPs), which adhere to the principles and objectives of 4R Nutrient Stewardship? (Visit <http://www.ipni.net/4r> and www.nutrientstewardship.com)
- Could pilot efforts be undertaken in selected watersheds, to evaluate the impacts of intensified ‘4R’ BMP implementation, using rigorous water quality monitoring, to evaluate achievement of scientifically-defensible, realistically-attainable, designated use goals?

If (or when) strict water quality numeric nutrient criteria and standards are required within your state, or within your watershed, how would you cope? Could you continue to farm and economically prosper with potentially mandated reductions in nutrient use? Is it time to get more involved in supporting and implementing 4R Nutrient Stewardship?

For more information, contact Dr. Clifford S. Snyder, Nitrogen Program Director, International Plant Nutrition Institute, P.O. Drawer 2440, Conway, AR 72033-2440. Phone [\(501\) 336-8110](tel:5013368110). Fax [\(501\) 329-2318](tel:5013292318). E-mail: csnyder@ipni.net.

NASAC is Now on LinkedIn.

LinkedIn is the preferred professional social networking site. If you already have a LinkedIn profile, request to join NASAC. Creating an account takes a little time, but is a great way to stay in touch.

http://www.linkedin.com/groups?gid=3128950&trk=myg_ugrp_ovr

!!! IT'S TIME TO PAY YOUR NASAC DUES !!!

**2010-2011 NASAC OFFICERS
AND BOARD MEMBERS**

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PAST PRESIDENT: Jimmy Carlisle, AL

Membership in NASAC is important. The stronger our association is the louder our voice will be heard when testifying or commenting on aquaculture issues. Membership form is included with this newsletter and available at http://www.nasac.net/Member_Application.pdf. Dues are good from July 1, 2011 to June 30, 2012. Questions concerning dues contact Joseph Myers, NJ Department of Agriculture, Fish and Seafood Development, PO Box 330, Trenton, NJ 08625, (609) 984-2502, (609) 633-7229 FAX, joseph.myers@ag.state.nj.us.

**DIRECTORY OF STATE AQUACULTURE
COORDINATORS**

As changes occur (**retirement, resignation, etc**) please send the new information to Lynne Canter, nasac@nasac.net

It is very important to keep your state's information current. Without the correct email or address your State will not receive the quarterly newsletter or important information disseminated concerning aquaculture issues. You can get an up to date copy of the Directory of State Aquaculture Coordinators from the NASAC website: www.nasac.net

To get an updated copy of the Aquaculture Coordinators and Contacts go to the NASAC web site www.nasac.net and click on NASAC Directory

NATIONAL ASSOCIATION OF
STATE AQUACULTURE COORDINATORS
(NASAC)
www.nasac.net

INVOICE/MEMBERSHIP FORM
DUES 2011/2012

(Please print or type)

NAME _____

TITLE _____

Agency/Institution _____

Address _____

City _____ State _____ Zip _____

Business phone _____

FAX number _____

E-Mail Address _____

Type of Membership (check one)		Total
<input type="checkbox"/> Executive Member	\$100	_____
(State, Province, Territory Coordinators)		
<input type="checkbox"/> Associate Member	\$ 50	_____
(Industry, Federal agencies, others)		

NASAC's Federal Employer Identification Number: 54-1589538

This application is also available as a fillable form at http://www.nasac.net/Member_Application.pdf.

Please remit annual membership dues for **fiscal year July 1, 2011 through June 30, 2012**. Please remit payment by the end of the first quarter, September 30, 2011. MAKE CHECKS payable to NASAC and remit to:

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